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We attain our legal majority next year, and hope to signalise it by still greater efforts to meet the wants of our subscribers. Will those whose subscriptions expire with the current issue favour us with an early remittance for renewal?

In the year just closing our subscribers have received 580 pages of literary matter, which is more than is contained in any previous volume of THE CHEMIST AND DRUGGIST. This includes an extensive Collection of Formulæ translated from the German of Ed. Hahn, which is certain to prove of great and permanent value. To make the volume as valuable as possible we have prepared a very complete index, which will be issued with our next number, on January 15th. With this addition we hope that THE CHEMIST AND DRUGGIST will be considered to deserve a place on the shelf with the Pharmacopœia and other standard works of reference.

The Diary for 1879 has now been forwarded to all subscribers both at home and abroad. We have a few extra copies printed, which can be supplied to subscribers at 2s. 6d., to non-subscribers at 3s. There is no better training for an apprentice than to make him keep a diary regularly.

The Court of Exchequer has refused to grant a rule for a new trial in the case of Apothecaries' Society v. Shepperley.

The counsel for the plaintiffs claimed that on Mr. Shepperley's own evidence it was shown that he had infringed the Apothecaries' Act by his treatment of a customer, that he was not protected by Section 28 of the same Act, and that therefore the judge ought to have directed the jury to find a verdict for the plaintiffs on the legal point. Mr. Baron Pollock thought it would have been unfair and unprecedented, in a penal case, to have convicted the defendant on his own evidence, and the Lord Chief Baron thought that there was no proof of actual treatment.

An important discussion took place at the last meeting of the Pharmaceutical Council, on a motion of Mr. Hampson's to grant from the funds of the Pharmaceutical Society an "adequate sum" to assist the Trade Association in the defence of the "Apothecaries' Company v. Shepperley" case. The Council rejected the motion by 9 votes against 6. Thereupon, a requisition signed by about 50 members was presented to the Council, asking for a special general meeting of the members to be called in order that the decision of the Council might be appealed against. The meeting is to be held on January 9, at noon.

Chemists are reminded once more that to be registered as dentists they should send in their applications before the end of this month. The registration fee will be raised next year from 2l. to 5l. They must apply to the Registrar of the General Medical Council, 315 Oxford Street, W., for a form on which to make a declaration. We have fully explained the Dentists Act in previous numbers. Correspondents wishing for particulars are requested to refer to page 515 of our last issue (November 15) before addressing questions to us.

The Weights and Measures Act also comes into force on January 1, 1879. Chemists should see that their labels and handbills are not infringing this Act. Eight ounces of cod liver oil, for instance, must not be called half-a-pint. It is possible, too, that graduated measures will have to be verified, but hitherto the Board of Trade has made no provision for this work.

The important appeal of the Pharmaceutical Society v. The London Public Supply Association will probably be heard in the Court of Queen's Bench this day (Saturday), or early next week. The result may decide the troublesome question whether co-operative stores and limited companies are independent of the Pharmacy Act.

Professor Wurtz, of Paris, he who once declared that chemistry was a French science, delivered the triennial Faraday lecture on November 12. His subject was "The Constitution of Matter in the Gaseous State," and his experiments, no less than his discourse, won the hearty applause of his audience.

Professor Wanklyn announces that he and a friend have discovered a new means of analysing water, but in order to assure to himself and his partner a due share of the profits of this discovery, the process has been patented. It turns out to be a modification of the "permanganate" process.

Dr. Tidy has read an important paper before the Chemical Society, summarising his results with various processes in the examination of water for organic impurity. His conclusion seems to be strongly in favour of the permanganate process, and equally as decidedly in condemnation of the ammonia process. Discussion on the paper was adjourned until the paper had been printed.

The magistrates of the Salford Intermediate Sessions have quashed the conviction of a Salford chemist under the Sale

of Food and Drugs Act, for selling violet powder containing a large proportion of sulphate of lime. The evidence brought before them convinced them that there was no standard formula for the preparation of this article, and therefore they said it could not be maintained that the purchaser had received something which was not of the nature, substance, or quality of the article demanded.

The Local Government Board, in reply to an inquiry from the Chief Constable of Cumberland, have intimated their views on the question whether an Inspector purchasing goods for the purpose of analysis could be legally prejudiced. They evidently consider that the opinion attributed to the Lord Chief Justice in favour of the adulterator is not a sound one; and it appears that his expressions, as reported in the papers, do not appear in the authorised Law Reports. It is, therefore, probable that the technical defence thus apparently established will be abandoned.

The Clerical Co-operative Association (Limited) has been formed, and the names of a number of eminent ecclesiastics have been published either as directors or approvers of the scheme.

Dr. Quin, who was the first physician to introduce homœopathy into this country, and whose influence ensured for it fashionable patronage, died last month, at the age of 79. We understand that the trustees of the Homœopathic Hospital, which he founded, are his residuary legatees, and it is expected that the Hospital will consequently receive very nearly twenty thousand pounds.

The Chemists' Ball is announced for January 22, at Willis's Rooms as usual. This is the thirteenth annual ball. The Secretary for the year is Mr. Arthur L. Savory, of 143 New Bond Street.

The Trade Association has appointed a committee to consider the advisability of promoting the candidature of several gentlemen of its own selection as members of the Pharmaceutical Council. This course seems to have roused the anger of certain members of the latter body.

Mr. Norman Lockyer's alleged discovery of the compound character of many of the elements, which was mentioned at the Paris Academy of Sciences last month, was brought before the Royal Society on Thursday evening last. In the course of a long series of comparisons of the spectra of the metals with that of the sun, Mr. Lockyer observed that certain lines reappeared with singular persistency in the spectra, not only of one, but of several so-called elementary substances. These lines have been generally attributed to the presence of impurities in the substances under examination, but the scrupulous precautions observed to exclude every possible trace of contamination, and the continued recurrence of the same lines under varied circumstances suggest the belief that they are not accidental, but essential; or, in Lockyer's own words, "the hypothesis that identical lines in different spectra are due to impurities is not sufficient." It seems a logical deduction from this, that the metals in question have some constituent in common, and are, therefore, not elementary. Mr. Lockyer's conclusions are the result of a hundred thousand spectroscopic observations, which have taken six months to summarise.

ASAFOETIDA is exported from Afghanistan to Hindostan. The Ameer extorts at various places a duty of 13*l*. per camel load, about 4 cwts. Churru is also sent to India. In 1876 the exports of this article were valued at 86,000*l*.

Pharmacalia.

THE ELECTRIC LIGHT.

THE quiet of the Adelphi was invaded on the night of Wednesday, December 4. An announcement had been made that a lecture would be delivered by Mr. James N. Shoolbred, B.A., Mem. Inst. C.E., "On the Practical Application of Electricity to Lighting Purposes," and it was further understood that there would be a competition between the rival inventors. Long before the usual hour of eight o'clock, a dense, and, indeed, an angry, crowd besieged the Hall of the Society of Arts. Outside, an electric lamp threw a vivid light on the opposite buildings, giving an appearance of white marble to the spot where the rays fell, and leaving the rest in absolute darkness. A curious effect was thus produced, not unlike a magnified spectrum. Inside the entrance hall another lamp, naked, was enough to blind the visitors, and made a buzzing noise which was distressing. When we with difficulty got in, a member was declaiming his grievances to a struggling audience, and adverted in no measured terms to the fact that he had paid two guineas for his membership, and that the conduct of the directors was of a shameful character. Whilst the orator was thus theorising, some of the crowd took a practical view of the matter, and successfully evaded both the signature-look and the small boy who was stationed to collect the tickets, and shared the mental banquet upstairs as uninvited guests. Dr. Siemens was in the chair, and from the centre of the ceiling hung one of his own contrivances, the current being supplied by "a dynamo-electric machine attached to a motor consisting of a three-cylinder Brotherhood steam-engine." The Brotherhood had not agreed to dwell together in unity—at the commencement the lamp burnt steadily enough, then it fluctuated, then it grew dim, and there was loud cheering when the gas had to be turned on. But the old lamps for new had scarcely been substituted, when the Siemens's exhibited more positive electricity, and the gas looked as wretched as it does alongside of the Gaiety Restaurant. There were counter cheers, and much amusement was created. The lamp was not to blame, but the engine boiler, which had been hurriedly put up for the occasion, so that the pressure of steam sometimes fell so low as almost to come to a dead stop.

There were other lights maintained in action: drawings and diagrams were suspended on the wall, and a very liberal supply of patent lamps of various manufacture was on the lecture-table for examination. Mr. Shoolbred's lecture, which will be found in the Journal of the Society of Arts, was a summary and review of the results that have been of late obtained by the application of the electric light to illumination for industrial purposes. As the details of the discourse can be consulted *in extenso*, we need only mention a few striking particulars.

Lighthouse electric illumination was more expensive than that of gas, owing to the special necessities of the case, and the payment of skilled assistants. At the goods station of the Northern of France Railway, at La Chapelle, Paris, a Gramme machine and a Suisse lamp were used with a saving over gas of about 60 per cent. At the ironworks of Messrs. Powell, at Ronen, it was found that the expense of electric lighting might be calculated at 2*s*. 10*d*. per hour, as against 7*s*. 7*d*. for equal gas illumination. Finding the economy so great the new system was to be extended to the rest of their works. Gramme machines and Serrin lamps were used, having been on their trial for two years. The Lontin electric light was introduced by the Paris, Lyons, and Mediterranean Railway Company, at their Paris terminus. The

fective illuminating power of each electric lamp was considered equal to that of 80 gas-jets. After preliminary trial, a contract for 12 months was made: 12 lights were to be provided, all emanating from one dividing machine, and the total cost per hour for each light was 5*d.*, the contractors requiring no requisites except water, and bearing working expenses. The Western of France Railway Company had introduced the Lontin system at their Paris terminus on the Mazare. The lights were naked, without any protection; the lamps used were the Serrin, modified by Lontin; the total hourly expense of each light was 8*d.*

Another system, called the Jablochkoff, introduced for street lighting in Paris, was found to cost 2.6 times more than gas, and accordingly the authorities terminated their contract on the last day of November. The contractors had offered to continue at 6*d.* per light per hour, but a provisional contract only had been made at the rate of the original cost of gas. In the Avenue de l'Opera each light was shown to possess a maximum of 300 candles of intensity with the naked light, but, screened by an opaque globe, the maximum was reduced to 180 candles. The Jablochkoff light used at Billingsgate threw most of its light upward, and wanted a reflector.

There was a brief discussion at the close of the lecture. Some thought that the subdivision of the light was not a very hopeful enterprise; others that it would be effective only for large spaces; further improvements were desirable for the lamps; while Mr. W. H. Preece found the Serrin lamp to be brilliant, the Werdermann steady, and the Wallace durable, the Rapiéff very pretty, but that no one single lamp united these characteristics. Mr. Edison had taken out 269 patents, of which, as far as the speaker knew, only three were being worked, and his electric discoveries were "a tremendous mare's-nest."

What shall we gather from these many sentences of many men? We are told that the carbons themselves placed perpendicularly or horizontally cast a shadow, which is deep in proportion to the intensity of the light—a fact which was obvious at Billingsgate, and may be verified in the Strand. We are told that success will be delayed until a cheap generator has been invented, and that the wasting of the carbon points has been remedied. But we reflect that infinitely greater difficulties met the introduction of steam as applied to locomotion, and in the days of Stephenson there were not wanting those who ridiculed the possibility of its application. Gas cannot compete with the electric light in brilliance, and as a lighting agent it must give way; mechanical improvements will be devised, cheaper sources will be suggested, and our thoroughfares will rejoice in a new and effective illumination.

* *

THE MANCHESTER ASSOCIATION.

The pharmacists of Manchester have cause for discouragement, but none for despair. There is a tide in the affairs of men, and it obeys the natural law of being subject to an ebb and flow. John Bell would have shut up his shop in Oxford Street had he yielded to a temporary depression, and we see no reason whatever why Mr. Benger should not look hopefully to a most prosperous issue. It appears that at the Manchester Association there was but a meagre attendance at the first and last evening meeting, while a large audience was present at the second one, when a trade question was discussed. Manchester is not alone in fluctuations of this sort. At a recent lecture at "the Square," given by an authority in his department, there were assembled a few students, not as many as the empty benches and less than a dozen persons occupied the chairs in front. Just before, when Professor Redwood talked about spectrum

analysis, there was hardly standing-room. We learn that so small has been the demand upon the librarian at the Manchester Association that the books have been removed and the rooms closed: that in consequence of an insufficient number of entries, botany has been suspended, and that there is an extraordinary falling-off in the students attending the chemistry and materia medica of Mr. Siebold, the decrease being from 84 to 33.

Let us assure Mr. Benger and the gentlemen of the executive that there is no institution or organisation which does not at some period of its existence have to pass through a similar crisis. We see in the circumstance the strongest call for exertion, but exertion unaccompanied with any misgiving as to a victorious outcome. For ten years Manchester has advanced the cause of pharmacy; students direct from its Association have been conspicuous for their success in the Preliminary Examination—successful to a proverb; its members have been foremost in promoting early closing; the enthusiasm shown by its original associates in 1868, the date of the Pharmacy Act, kindled the expiring flame in other districts; and we say distinctly that Manchester, in spite of severe London competition in the direction of education, will not go down. The Chairman, Mr. Slugg, used the very figure with which we started, and described how, in the trade of the country, the tide ebbs and flows. We would remind the Association of a device worn by a famous regiment, a motto which we all of us are occasionally tempted to forget—"Ride through."

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THE HISTORY OF PHARMACY.

In the year 1511 the first Act of Parliament relating to the medical profession was passed, entitled, "An Act for the Appointing of Physicians and Surgeons": one body of practitioners was thus constituted who practised medicine, surgery, and pharmacy. The physicians' assistants were called apothecaries, and, having gained a knowledge of drugs, they began business on their own account. The physicians were separately incorporated in 1518, the surgeons in 1540, and the apothecaries obtained a charter in 1617. Six years after the apothecaries had been formed into a society, they opposed the druggists and grocers by the establishment of a manufacturing dispensary. The druggist was then what his name implied, and he was part of the Grocers' Company; the chemist was not incorporated, and he was the successor of the alchemist. The first chemist, as far as we can discover, who built a manufacturing laboratory connected with pharmacy in England, was Ambrose Godfrey Hanckwitz, and alchemy was practised in his laboratory for some years. The druggist and grocer must not be confused with the chemist and druggist of later days. In 1671 the apothecaries built a chemical laboratory, a decided step in advance. By 1682 this establishment had grown in importance, and within a few years the company became a trading body.

In 1694 the number of the apothecaries was about 1,000, having risen from 114. Their body had become influential, and claimed many parochial exemptions. They ceased to limit themselves to pharmacy, and began to practise medicine. This the physicians resented, and in their turn set up dispensaries—one at the Physicians' College in Warwick Lane, another in St. Martin's Lane, and a third in St. Peter's Alley, Cornhill. These were opened in 1697, for the preparation of prescriptions and the retail sale of medicines. Here is the curiosity of the situation—nearly at the commencement of the eighteenth century the apothecaries excited the jealousy of the physician for meddling with

physic, while the physician in self-defence set up as dispensing pharmacist. Bitter and desperate was the contest: it was war to the knife. The physicians gave as some of their reasons for sending their *wealthy* patients to the dispensary, "that many excellent remedies were there deposited, which have never yet been trusted in the apothecaries' shops; that the physician was not obliged to prostitute his honour and conscience by over-loading his patient to oblige a craving apothecary; and that he could serve his patient, *quantity* for quantity and quality for quality, fifteen shillings in the pound cheaper than anywhere else."

As formerly the assistant of the physician became the apothecary, so now the assistant of the physician, trained by him in the dispensary, became the chemist and druggist.

In the year 1723 the College of Physicians obtained an Act of Parliament to visit and examine apothecaries' shops within the City of London and suburbs thereof, or within seven miles' circuit of the said City. Violent altercations ensued, not free from personal feeling. In 1748 the Apothecaries' Company was empowered to sell medicines in London, or within seven miles, and also to search the shops within that district. They sought to extend their powers to the searching of chemists' shops, but failed in their endeavour. A determined opposition now arose between these two bodies, carried on in a manner which was creditable to neither side. In 1793 the apothecaries made a dead set upon the chemists, charging them with unwarrantable intrusion and gross ignorance. Their crime was that of vending pharmaceutical preparations, and compounding the prescriptions of physicians.

An indignation meeting was called on June 17, 1794, and held at the Crown and Anchor, in the Strand.

The druggists were described as "a body of men unknown to the world till about the end of the last century; unauthorized by any public charter, and almost undefined by any public Act." Their spread was compared to a contagious. "From the larger cities and towns it was beheld propagating itself to smaller cities and towns, till at length, so general was the disease, there was scarcely to be found a village or a hamlet without a village or a hamlet druggist. If the sale of medicines and the giving of advice were not here sufficient to support the vendor, he added to his own occupation the sale of mops and brooms, bacon and butter, and a thousand such articles besides." To quash the iniquity it was proposed to form a general association of the apothecaries of Great Britain, and to receive no apprentice, and to employ no assistant, who had not had a classical education. At this date also occurs the charge that the druggists prescribed as well as vended medicine. The new society, under the title of "The General Pharmaceutical Association of Great Britain," broke up soon after its formation, and in 1802 the apothecaries and chemists merged their disputes in coalescing against "an innumerable host of informers," created by the provisions of a Medicine Act, which concerned the sale of patents and stamped preparations. In proportion as the medical practice of the apothecaries increased, their dispensing trade diminished; a tax on drugs, and an exorbitant duty on glass, brought matters to a crisis, and they applied to Parliament for a Bill to constitute a fourth medical body, with the power of granting licences, those of pharmacy included, and of conducting examinations. The chemists and druggists were alarmed; opposition came both from them and from other quarters, and the Bill was withdrawn. A second Bill was now prepared, and met with even greater opposition from the chemists and druggists, so much so that the insertion of a clause was insisted upon, that left those practising pharmacy

to pursue their calling without interference. The Apothecaries Act of 1815 thus became law, and the contest ended.

For 21 years no attempt was made to interpret the Apothecaries Act in a manner adverse to chemists and druggists, but in a Parliamentary Committee, June 9, 1836, Mr. Nussey gave evidence that the Act ~~repealed~~ whatsoever privileges they possessed at the time the Bill passed, among which they reckoned that of prescribing and dispensing in their own shops; that this occasioned medicine to be practised by a number of persons who had not received any regular medical education. There was ground for this interpretation, for many had assumed the title of chemist and druggist in order to fraudulently practise as surgeons and physicians. These were a disreputable race, and their conduct justly led to legal proceedings respecting the very point which, on a frivolous pretext, has been raised once more. The Apothecaries' Society should learn how to distinguish between things that differ. To prosecute a man who unblushingly assumes the high functions of the profession is one thing; to cause a common informer, with a lie in his throat, physical and moral, to support an indictment, is another. It is not thus that the interests of the healing art are promoted; it is not thus that the welfare of the public is watched over. Dealing with drugs and chemicals does not compel a pharmacist to be abnormally ignorant of their properties, and he is at least as competent to give advice in simple cases, without detriment to his fellows, as an old woman of average experience.

The Pharmaceutical Council.

THE Council met on December 4. Messrs. Gostling, Hanbury, and Mackay were absent.

THE ELECTION OF EXAMINERS.

The Boards of Examiners for England and Scotland were appointed, subject to the approval of the Privy Council. On the English board Messrs. T. E. Greenish and Sydney Plowman were appointed, in place of Messrs. F. J. Hanbury and C. Umney, both of whom had written to ask that their names might not be submitted to the Council, as they would not be able to devote sufficient time in future to the duties required. No alteration was made in the constitution of the Scotch board.

Messrs. Shaw and Schacht asked for information as to what had been done by the committee appointed to investigate the possibility of so altering the mode of appointing Examiners as to conduce to a joint system of examination.

The President said that meetings and deputations and conferences had taken place, but no report seemed to have been made, though the instructions to the committee expressly included the preparation of a report as its final duty. The question whether examinations should be held more frequently than alternate months was allowed to stand over until the Library Committee could confer with the Board of Examiners.

PROSPERITY.

The Secretary reported that the Benevolent Fund had nothing to pay this month, and had 413*l.* in hand. It was therefore resolved that 250*l.* should be invested. Only two applications had been made for grants, and one was held over for further inquiry, the other because the applicant had only lately received a grant.

THE LIBRARY.

A report was presented, showing that the total attendance at the Library during the past five years had been as follows:—1874, 5,290; 1875, 7,339; 1876, 8,571; 1877, 7,305; 1878 (to end of October only), 6,841. The number of books lent out showed a fair advance this year.

LECTURES.

It had been arranged that Professor Redwood should deliver two lectures on the Electric Light on the second and third Wednesday evenings in January, and that Professor Bentley should deliver a lecture in March next, on "The Life of a Plant."

THE MUSEUM.

A large number of specimens had been received from various sources, and the Curator presented a report showing that a number of the exhibitors at the Paris Exhibition were willing to present specimens from their collections.

DANIEL HANBURY.

Mr. T. Hanbury presented 35 engraved portraits of the late Mr. D. Hanbury, one to be presented to each student who should obtain the Hanbury Prize.

LADY STUDENTS.

The President and Mr. Sandford had examined the premises carefully, and reported that no part of the building could properly or advantageously be applied for the purpose of providing additional accommodation for lady students. The professors said there was no immediate occasion for such additional provision.

AMENDING THE PHARMACY ACT.

The Special Committee appointed to investigate this subject had held two meetings and had prepared a report, but this, it was resolved, should be kept private for the present. The Committee was requested to continue its labours. Mr. Hampson proposed that Mr. Fairlie's name be added to the Committee. The President remarked that such a proposition was irregular, but, as no one seemed to see how it was irregular, Mr. Greenish seconded the motion. Then Mr. Bottle announced that, in consequence of some remarks Mr. Fairlie had made elsewhere, to the effect that he did not apprehend anything very vigorous from the Committee, he (Mr. Bottle) would make way for Mr. Fairlie on the Committee, but he should object to serve with him. Mr. Hampson considered that Mr. Fairlie was justified in expressing his personal convictions, and he did not see that there was anything in them personally offensive to any member of the Committee. Mr. Fairlie said that at a recent meeting of the Council Mr. Bottle had advocated this Committee, on the ground that, if the Council did not take up this work, some one else would. It was on that that his remarks were based. He was gratified with the work of the Committee so far as it had gone. He was sorry if he had given personal offence, but he did not see why Mr. Bottle should decline to sit on the Committee with him. In that case he should decline to be a member of it, for he regarded Mr. Bottle as one of the most valuable members of the Committee, as he found that he had pressed a point on which he (Mr. Fairlie) felt very strongly. He thought Mr. Bottle, to be logical, should also decline to sit on the Council with him, or even to be associated with him in the same Society.* After some further conciliatory comments by other members, the resolution was put and carried unanimously.

THE WEIGHTS AND MEASURES ACT.

Mr. Bottle said there was a provision in this Act requiring that all measures should be verified. He supposed it would be necessary that chemists' glass measures should come under this provision. The President said when the deputation of the Council waited on the Board of Trade this question was mentioned, and he remembered saying that chemists would be only too glad if the Government would establish some practical means and place where such measures could be stamped or engraved in accordance with the requirements of the Act. The principal Secretary to the Board of Trade, however, told him that the Department could not undertake the work. Mr. Bottle said the Act seemed to indicate that the Department had to under-

take it. Mr. Woolley said he knew the local officials were getting ready to do it in Manchester. The President said it was most desirable that this verification should be done.

ABSENTEES AT THE EXAMINATION.

On behalf of Mr. Mackay, Mr. Sandford moved a resolution, of which the former councillor had given notice, to the effect that any candidate for examination who did not attend on the day appointed, and who could not produce satisfactory evidence of his inability, should lose one guinea. This was carried unanimously.

PROTECTION OF TRADE INTERESTS.

Mr. Hampson had given notice of the following resolution:—

That in consideration of the important interests of the members of the Pharmaceutical Society, and of the trade generally, which are likely to be seriously affected by an adverse decision being given in the case of the Apothecaries' Company v. Shepperly, which still awaits decision in a court of law, an adequate sum be granted from the funds of the Pharmaceutical Society in aid of defences in the said case.

Before calling on Mr. Hampson the President read a letter which he had received from the solicitors to the Society in reference to a somewhat similar resolution which had been put down by Mr. Fairlie but not pressed. He (the President) had doubts as to the legality of the course proposed to be taken, and the solicitors having gone into the questions considered it very questionable whether the Council had power to vote money as proposed. They, however, would prefer that the question should be submitted to counsel.

Mr. Hampson then proceeded to argue in support of his motion. Having referred to the earlier efforts of the apothecaries to restrict chemists and druggists as related by Mr. Jacob Bell in his "History of Pharmacy," he went on to show how a defeat in the case now before the courts would affect every chemist and druggist. He remarked that without doubt the correspondence of the solicitors who represented the apothecaries in 1815 clearly proved that the 28th section of the Act was intended to cover and secure the rights of chemists and druggists, and if it turned out that it was defective the trade would simply have to go to Parliament to ask for the repeal of the 20th section of the Act, and he considered that it would be the duty of the Society to take that course. He affirmed that it was part of the duty of the Society to take part in the settlement of this question. The charter declared that the Society was established for the protection of the business of chemists and druggists, and besides that the Society was itself established by means of a fund which had been raised for the defence of the trade against medical encroachment. In that way 862*l.* 18*s.* 2*d.* was handed over to the Pharmaceutical Society, and for 35 years subscribers had paid their guinea under the charter which authorised the Society to protect the interests of the trade. He left it open to the Council to say how much should be given, but he urged that now that the interests of the trade were seriously jeopardised it was their duty to give an adequate sum.

Mr. Woolley seconded the proposition, and referred to the expression of feeling among chemists in the country in reference to the case.

The President said the difficulty was that this would be granting a sum of money to a body over which the Council had no control.

Mr. Shaw supported the motion, and traced in some detail the history of the money which, under the title of the Old Druggists' Fund, had been transferred to the Society, and which was alluded to by Mr. Hampson. He said the value of the money now at compound interest would be over 2,800*l.* He reminded the Council that in 1851 a sum of 20 guineas was given to the Great Exhibition, and he would like to know how, if that was a fair and legitimate object of expenditure, the present could be an improper one?

Mr. Bottle opposed the motion, not that he did not recognise the duty of the Pharmaceutical Society to defend the interests of the trade, but because the Association for which this money was asked did not appear to be in need of help. He cautioned the Society against meddling with the affairs of the Association, if they wished to keep on good terms with it. It was also in evidence that the Association had

* We have received a letter from Mr. Fairlie explaining that the official report, which makes him say that if Mr. Bottle refused to sit with him on the Council he (Mr. Fairlie) should resign his seat on the Council, is incorrect. We have given in our report Mr. Fairlie's own version of his remark.

other objects, one being, as shown by their last meeting, that they felt it necessary to meddle with the constitution of the Council by prostituting their funds for the purpose of ensuring the election of men of their own choice.

Mr. Churchill remarked that all that had been done was to appoint a committee to consider whether such action would be desirable.

Mr. Bottle said that evidently the subject was in contemplation, and he thought this one reason why the Society should not contribute to the Association.

The President said he did not know where the money might go, nor what was to be done with it, nor what was the sum.

Mr. Hampson said it would be easy to provide a means to appropriate it for a specific purpose if there was found a willingness to spend anything in defence of the trade.

Mr. Churchill said in 1876 the Council had resolved to defend any clear and proper case of counter practice. He considered that Mr. Shepperley's case as it now stood before the Court was such a case.

Mr. Sandford said the Druggists' Old Fund alluded to by Mr. Shaw was not given to the society for any specific purpose whatever, but to be used at the discretion of the council. It was altogether unconnected with the case of Mr. Shepperley. He also urged that a decision in Mr. Shepperley's case would not decide what was wanted. The verdict of the jury was that Mr. Shepperley had not exceeded his duty. The question that the trade wanted to have decided was how far was the right of prescribing preserved to chemists by Section 28 of the Apothecaries' Act, and the decision of Shepperley's case, even by the House of Lords, would not settle that point. He thought it would be impolitic for the society to appear as the advocate of prescribing. Chemists must to a certain extent prescribe, and he believed that the Apothecaries' Company would not prosecute if that prescribing were kept within reasonable limits, which, however, could not be defined on paper. The defence of Wiggins's case by the association had, he thought, damaged the trade very much. He himself believed that Section 28 gave chemists and druggists great privileges, and that they had a right to prescribe, and Baron Cleasby's remarks confirmed this view. But Barons Bramwell and Pollock had so clearly laid down the law on the other side, that he felt what was done must still be done on sufferance. He believed that if chemists kept to their own trade they might go on as they had done.

Mr. Betty said every chemist and druggist was no doubt concerned in this case, and though there were many things to consider, it seemed as if at the present moment the Society had to choose whether they would throw in their lot with the Society of Apothecaries or with members of their own body.

Mr. Schacht was not disposed to reverse the decision the Council had already arrived at, after considering the case of Mr. Shepperley in the first place. For his part he counted the cost of every act before he did it. Mr. Shepperley thought he had some claim on others when he was prosecuted. He could not blame the Association for taking the matter up, but if it had done so, and could carry it no farther, he should be inclined to fall back on the old axiom, that a person who began to build should first count the cost.

Mr. Greenish said the present position of the case was one of pure and simple counter practice, and he should, therefore, like to see the Council assist in the defence.

Mr. Fairlie said if the Apothecaries' Society should gain this case others would follow, and no one could tell who would be the next victim. He voted for the resolution, not as a member of the Association, but as a member of the Pharmaceutical Society, and as a member of the Council, remembering that he was entrusted with the interests of its members. He did not see why a druggist should be debarred from giving advice any more than any member of the outside public. Whether the Association was strong or weak was not the question. It was the duty of the Society to protect the members of the trade.

The President thought it would be a bad precedent to agree to this vague resolution. It would be equivalent to saying that the Council was unworthy to carry on the business of the Society. He was aware the question was serious, but he must vote against the motion.

Mr. Hampson, in replying, said that the resolution passed

at the Crown and Anchor in 1811, which Mr. Shaw had read, and which stated that the object of the Druggists' Fund was the protection and advancement of the interests of chemists and druggists, clearly showed that it was intended for such purposes as this. He was happy to hear Mr. Sandford say that they must prescribe to a certain extent. He wondered what Mr. Sandford would take as a simple case if he would not defend this one. He did not believe if the Angel Gabriel came in the person of a poor chemist, Mr. Sandford would defend him. This case was a test case, and the question was whether the Council should remain inactive while members of the Society and the trade at large were attacked. The case showed an intention on the part of a section of the medical profession to restrict the action of chemists, and it was easy to see that intention by reading the medical journals. Surely it was the duty of the Council to put its foot down firmly and maintain that chemists were acting within the law, or if they were not get the law altered.

The motion was then put to the vote, with the following result:—

For—Messrs. Churchill, Fairlie, Greenish, Hampson, Shaw, and Woolley.

Against—Messrs. Bottle, Cracknell, Frazer, Hills, Rimington, Robbins, Sandford, Schacht, and Williams.

Mr. Betty was present at the division, but did not vote. [Messrs. Atkins and Savage, who were present at the early part of the meeting, had probably left before this division.]

The motion was therefore lost.

A SPECIAL GENERAL MEETING DEMANDED.

On this Mr. Churchill presented a requisition, signed by about 50 persons, requesting the Council to call a special meeting of the Society to consider the advisability of rendering substantial pecuniary aid to the Association to assist in defending the legitimate interests of the trade. The President said that, in accordance with the bye-law, this meeting must be called. On the motion of Mr. Fairlie the date of the meeting was fixed for January 9, 1879, at 11 for 12 o'clock. On Mr. Schacht's suggestion it was decided that legal opinion should be taken previously whether the object of the meeting was legal.

It was also decided to adjourn the next meeting of Council from January 1 to January 8.

A resolution of sympathy with Mr. Gostling was unanimously passed, that gentlemen having been prevented attending the Council, owing to the sudden death of his wife.

The Chemists and Druggists' Trade Association.

A MEETING of the Executive Committee was held at the office of the Association, Birmingham, on November 13, 1878, at 1 P.M.; Mr. Thomas Barclay (Birmingham), Vice-President, in the chair.

The Report of the Law Committee dealt with prosecutions instituted against chemists and druggists by the Apothecaries' Company, with the action taken by the committee in regard to the Medical Bills which came before the Legislature during the last session, and with the various cases in which members had been defended by the Association in actions brought against them under the Adulteration Act.

Mr. SHAW said he thought the decision arrived at by the Law Committee in reference to cases in which members had been defended for alleged infringements of the Adulteration Act must commend itself to them all, but with regard to Wiggins's case, in his opinion, the Executive should have been called together prior to a defence being ordered. By the tenth rule of the Association the Executive was empowered to determine when action should be taken in cases suggested to it for prosecution or defence, and before a case was defended the whole particulars respecting it should be ascertained and considered.

The SECRETARY said that the Law Committee were, by a resolution passed by the Executive, especially empowered to deal with such cases.

The VICE-PRESIDENT said that the action of the Association in regard to Wiggins's case had been in certain quarters misrepresented and very generally misunderstood. At the time Mr. Wiggins was sued by the Apothecaries' Company for the sum of 40*l.* he had an interview with the members of the Law Committee, and was fully and carefully questioned by the members of that Committee as to the nature of his business. His replies to the questions put to him being satisfactory, a resolution was passed instructing the Solicitor to put in an appearance to the writ, with a view to obtain particulars of the cases in which it was alleged that the defendant had acted and practised as an apothecary, as no particulars were stated on the writ. On an appearance being entered to the writ particulars were asked for and refused by plaintiffs. An application was then made to a Judge in Chambers for an order to compel plaintiffs to furnish particulars, when Mr. Baron Cleasby ordered particulars to be given. The particulars that were then furnished consisted of certain names of persons, but no addresses or information as to the nature of the complaints. Counsel then applied to a judge for an order for additional particulars, which was refused, and, in the opinion of counsel, it was considered unwise to appeal against this decision; so that until the witnesses for plaintiffs gave their evidence the Solicitor of the Association had no idea of the specific charges that were to be brought against the defendant. He continued to say that, as the new trial in Shepperley's case was at that time pending, the Association would have failed in protecting the interests of the trade had it permitted an action, the particulars of which were unknown, and which might at the trial have proved to be cases of the most simple and trivial description of counter practice, to pass undefended.

Mr. HAMPSON said that every care had been taken to ascertain the facts in the case, and he thought the Law Committee were in no way responsible for the adverse result of the trial. He did not regard the decision as entirely unfavourable to the trade, because the finding of the jury was not simply that the defendant had acted as an apothecary, but that he had acted and practised as an apothecary in taking cases that were dangerous.

After some further discussion—

Mr. SHAW said he had no motion to make on the subject. What he had said had been in a friendly spirit.

It was moved by the Vice-President, seconded by Mr. Andrews, and unanimously resolved:—

That the report of the Law Committee be received, adopted, and entered on the minutes.

The report of the Finance Committee was then read.

Mr. FAIRLIE said he found great difficulty in obtaining donations in Scotland at that time, particularly in Glasgow, but he hoped things would improve towards the close of the year, and he would move:—

That the report of the Finance Committee be received, adopted, and entered on the minutes.

Mr. HAMPSON, in seconding the resolution, said he thought at the present time a good opportunity existed of increasing their funds, as the decision in Shepperley's case had given great satisfaction to the trade, and there was a spirit of rejoicing abroad. It must be quite evident to all that the Association could not continue to carry on the defences of trade rights and privileges, unless substantial financial support was forthcoming, and he trusted a report of the proceedings of the trial would be issued from the office, making known their want of funds.

Mr. ARBLASTER said that at an annual meeting of the Midland Counties' Chemists' Association, held the preceding day, 10*l.* had been voted to the funds of the Trade Association.

The resolution was then put to the meeting and carried unanimously.

After some discussion on the advisability of making a spirited appeal to the entire trade for support, it was unanimously resolved:—

That the Law Committee be hereby empowered to take such action as they deem desirable in regard to the case of the Apothecaries' Company v. Shepperley.

And also:

That an abstract of the report of the hearing of the new trial of the case of the Apothecaries' Company v. Shepperley be prepared under the direction of the Finance Committee, printed, and issued to the trade.

In reply to questions, the Solicitor said that, with regard to the case of the Apothecaries' Company v. Shepperley, plaintiffs' solicitor had intimated to him that it was their intention to apply for a new trial. This might be done on the grounds of misdirection of the jury, wrongful admission or exclusion of evidence, or that the verdict was against weight of evidence.

Mr. SHAW asked if the Solicitor thought any of these circumstances existed.

The SOLICITOR said in his opinion they did not.

Mr. DELVES inquired if the plaintiffs had any further appeal, if their motion for a new trial was refused.

The SOLICITOR said in that case they might appeal on a point of law to the Court of Exchequer, from there to the Lords Justices of Appeal, and then to the House of Lords.

Mr. FAIRLIE then moved the following resolution:—

That a sub-committee be appointed to consider the desirability of this Association taking official action in the next election of the Pharmaceutical Council, by promoting the candidature of at least seven gentlemen who will pledge themselves to support trade interests.

He said he was formerly somewhat opposed to the Association taking any decided action in the matter before the meeting, but he must say that within the last few months his eyes had been slightly opened with regard to the position of affairs in relation to the Pharmaceutical Council as then constituted. He thought that Council should have some control over the editorial articles in the *Pharmaceutical Journal*, so long as that journal was the property of the Pharmaceutical Society; but it was evident to all of them that the Executive of the Association had not been treated well by the editor of the journal, yet the Council did not interfere. It had been shown time after time that, by the present mode of electing members of Council, the majority of the trade did not know for whom to vote, and a large portion of the voting power was not employed at all. The power to sue illegal traders for penalties under the 15th Section of the Pharmacy Act was vested in the Council, and unless the majority of the Council were prepared to rigorously enforce that section it became worthless. Amendments of the Pharmacy Act were urgently needed, and a committee had been appointed by the Council to ascertain what amendments were required, but he did not apprehend anything very vigorous would come of the matter. It had been suggested that the Legislature should be requested next session to repeal the 20th or penal clause of the Apothecaries Act, under which many vexatious prosecutions had been brought against chemists; but would the present Pharmaceutical Council assist the trade in such an endeavour? He thought not. If they were to have the true interests of the trade carried out there must be a majority representing those interests on the Pharmaceutical Council. The minds of the gentlemen present had been fully drawn to the question, and what they had to consider was whether the time had arrived when some action should be taken—in his opinion it had.

Messrs. Cross, Walker, Jervis, and Kerr, having spoken in favour of this motion,

Mr. HAMPSON said that he thought the step suggested required great consideration. The Association, although young, had shown signs of possessing great vigour and strength, and he thought it would soon be found to have considerable weight with the trade, and it would so be able to reflect its opinions, and thereby influence indirectly, yet very potentially, the election of the Pharmaceutical Council. He would ask the gentlemen present to hesitate before they agreed to the resolution proposed. If there were very grave dangers and issues before them, that required as it were immediate decision, he would, under certain conditions, support the resolution before the meeting; but such a state of things did not then exist. It should be borne in mind that the Pharmaceutical Council was compelled by Act of Parliament to perform other functions than those relating to matters of trade interest. It was an educational and examining body, and he thought it would be unwise to import into that Council too large an admixture of advocates for the advancement of trade matters. It was, however, extremely desirable that questions affecting the

interests of the trade should receive more attention and better consideration than the present Council thought fit to bestow on them. He hoped the resolution would not be pressed.

Mr. ANDREWS asked if gentlemen elected on the Council of the Pharmaceutical Society to represent trade interests would necessarily neglect educational and scientific matters?

Messrs. Shaw and Churchill took a view similar to Mr. Hampson, and ultimately the following resolution was carried:—

That a sub-committee be appointed to consider the desirability of this Association taking official action in the next election of the Pharmaceutical Council.

Messrs. Arblaster, Cross, Cubley, Earle, Greaves, Jervis, Reynolds, and Walker, with the officers of the Association, were appointed on the committee, Mr. J. M. Fairlie was appointed a member of the Law Committee, and Messrs. Andrews, Churchill, Fairlie, Greenish, Hampson, and Shaw, were appointed a sub-committee to consider the advisability of publishing a quarterly or monthly report of the proceedings of the Association for circulation among the members, and to report on same to the Executive.

The Pharmaceutical Society of Ireland.

THE meeting of the Council was held on Wednesday, December 4, 1878. Present:—Charles R. C. Tichborne, LL.D., Ph.D., President; Dr. Collins, Messrs. Allen, Bennett (Kingstown), Boileau, Hayes, Holmes, Oldham, Payne (Belfast), Pring (Belfast), and Simpson.

The minutes of the meeting of Council held on November 6 were read and signed.

Read a letter from Mr. George W. O'Ryan, of Balls Bridge, requesting to be allowed to present himself for both the Preliminary and Final Examinations in January, 1879, without waiting for a year as required by the regulations. Mr. O'Ryan stated that he had been engaged at practical pharmacy for the last twelve years, and passed the Preliminary Examination of the Apothecaries' Hall in 1874.

Some of the Council having expressed themselves in favour of granting this request, it was urged by others that it could not be done without repealing the bye-law requiring a year's interval between the two examinations, which had received the sanction of the Privy Council.

The Registrar was directed to inform Mr. O'Ryan that the Council regret that under the bye-law his memorial cannot be granted.

Read a letter from Mr. William Bannister (of the firm of Messrs. W. & H. M. Goulding, of Cork), requesting to be registered as a chemist and druggist in business before the passing of the Irish Pharmacy Act.

The Registrar was instructed to inform him that the Society has not, at present, any registration for chemists and druggists.

Read a letter from Mr. Andrew McNaught, pharmaceutical chemist, of Belfast, informing the Council of an unqualified person in Belfast who, he stated, compounded prescriptions and sold poisons.

The Registrar was directed to thank him for the information contained in his letter, and to state that the Council are at present considering the matter. The Registrar was also instructed to inform Mr. McNaught that the Council have had brought before them the fact that he had been using the title of Member of the Pharmaceutical Society of Ireland after his name, and that the use of the said title by non-members is illegal. (*See* Clause 6 of the Pharmacy Act, Ireland, 1875.)

In the absence of Mr. Brunner, who had given notice for the appointment of a committee to investigate charges of infringement of the Pharmacy Act, it was—

Proposed by Mr. Hayes, seconded by Mr. Holmes, and resolved:—

That the following be appointed a Law Committee, to consider all cases of reported infringement of the Irish Pharmacy Act; and to advise as to what cases appear to call for action on the part of the Council. The Committee to be elected annually. The first Committee to be Dr. Collins, Mr. Payne, Mr. Oldham, Mr. Brunner, and the mover and seconder of the resolution.

The Journal Committee presented their report as follows:—

"This Committee recommend that Members of the Pharmaceutical Society of Ireland who have paid their subscriptions be supplied with copies of either the *Pharmaceutical Journal* or *THE CHEMIST AND DRUGGIST*, gratis, from January 1, 1879.

The adoption of the report was moved by Mr. Holmes, seconded by Mr. Hayes, and carried. The President undertook to communicate with the proprietors of the two journals mentioned, with the view of carrying out the arrangement, if agreeable to those gentlemen.

Mr. George Ferguson, Adelaide Place, Dublin, was proposed by Mr. Holmes, and seconded by Mr. Oldham, as a candidate for membership.

The next quarterly examination for the Licence to act as Pharmaceutical Chemists was ordered to be held on Thursday, January 2, 1879, at noon, instead of on New Year's Day, on which it would have fallen. The change of date to be advertised by the Registrar.

The business on the notice paper having been disposed of, the meeting dissolved.

(Signed) HUGH JAS. FENNELL,
Registrar.

December 9, 1878.

Chemists' Assistants' Association.

DURING the month of November two papers were read at the Wednesday evening meetings of this Association, at 32a George Street, Hanover Square.

That of November 13 was by Mr. C. E. Stuart, entitled "How Plants Feed." The author described in detail the chief elements which enter into the composition of plants, with their sources and the organic substances formed from them; then the forces and conditions necessary to enable the plant to take up its food were considered; and lastly, the use and meaning of these forces and conditions as shown in the processes of assimilation, germination, &c. The nutrition of fungi and of so-called insectivorous plants came also under notice; and the paper concluded with an examination of the ashes of various plants, and deductions from it with regard to the use of manure.

On November 27 Mr. C. Miller set forth a sketch of the principles and practice of Gravimetric Analysis, giving a short description of the most approved methods for the estimation of the commoner elements, and illustrating the decompositions occurring in the processes by equations. It was acknowledged in the discussion which followed that the author had given an excellent treatment of his subject, and that it was only to be regretted that its nature had precluded him from describing some volumetric processes which had been shown to be simpler and better than those founded on gravimetry. In replying to the vote of thanks passed to him, Mr. Miller promised a paper on volumetric analysis at some future time. A vote of thanks was also awarded to Mr. Glover, who had presented the Association with a black-board.

The Council of the Association hope shortly to be able to place a piano at the disposal of members, for use when there is no official business to be transacted.

Metropolitan Reports.

LONDON—CITY.

ROBBERY BY A MEDICAL STUDENT.—At the Guildhall Police Court on December 3, Thomas Dyer Lewis, a medical student at St. Bartholomew's Hospital, was sentenced to six months' imprisonment for stealing a large number of medical books and valuable surgical instruments. For a long time a system of robbery had been going on at the hospital, and suspicion had fallen upon innocent people. Detective Downes was called in, and

discovered that the prisoner was the thief, and he traced a quantity of the lost property to different pawnbrokers, where the prisoner had pledged the books, &c., in his own name. When given into custody he confessed that he had stolen and pledged them. Since he had been remanded he had written a letter to the Governors of the hospital acknowledging his faults, and begging for mercy.

BETHNAL GREEN.

FIRE.—On November 29, at 1.40 A.M., a fire was discovered on the premises of Mr. C. F. Jones, chemical manure manufacturer, 36 James Street, Bethnal Green. The flames had broken out in a store containing about 5,000 sacks. At two o'clock all chance of saving the property was at an end, and the roof came down shortly afterwards. By three o'clock the flames were got under.

Provincial Reports.

BIRMINGHAM.

FIRE.—A fire broke out on November 23 in the manufactory of Messrs. Cadbury, cocoa manufacturers, Bridge Street, Broad Street, originating, it is supposed, from a defective flue. It was extinguished before any serious damage was done.

THE MIDLAND COUNTIES CHEMISTS' ASSOCIATION.—This society held its annual meeting at the Great Western Hotel on November 12, Mr. William Jones, President, in the chair. The report was presented and adopted. It disclosed a very prosperous condition, the treasurer holding a balance of 57*l.* 13*s.* 3*d.* It was recommended that 5*l.* be spent on additions to the library, and that 10*l.* be given to the Trade Association. The Christmas *soirée* of last year realised a net profit of 23*l.* 13*s.* 8*d.* The following gentlemen have kindly promised lectures for the winter:—Horace Swete, M.D.; Alfred Hill, M.D.; F. J. Barrett, F.C.S.; H. W. Jones, F.C.S.; and W. Southall, F.L.S. Mr. Haydon thanked the society on behalf of the Trade Association for the donation voted to the latter. The following officers of the association were elected:—President, Mr. W. Southall, F.L.S.; vice-presidents, Messrs. J. Holdsworth and J. Green; treasurer, Mr. J. Lucas; honorary secretaries, Messrs. Stokes Dewson and J. Austin; auditors, Messrs. F. Gibson and J. Green; committee, Messrs. T. Barclay, Haydon, Arblaster, Parc, R. Brown, Jones, Thonger, J. Bellamy, F. Gibson, A. Southall, J. Crookes, H. Sanderson, Snape, Grieves, Wilcox, and Gould. A discussion respecting the Shepperley case took place, and votes of thanks to the retiring officers were cordially passed.

LECTURE.—On November 29, at the Great Western Hotel, Birmingham, Dr. Horace Swete, analyst for the counties of Worcester, Radnor, &c., delivered a lecture to the members of this association, on the "Drinking Water of the Rural Districts, and Recent Legislation thereon." The President, Mr. W. Southall, was in the chair. The lecture dealt with water in its sanitary and legal aspects, and gave a description of the methods of water analysis.

BOLTON.

DISPUTED INSURANCE.—An action was tried last month in the Court of Appeal, in which Mr. Ebenezer Green Harwood, chemist, Bolton, sued the Royal Exchange Insurance Company on a policy of insurance to the amount of 450*l.* The question at issue was whether the dispute should be submitted to arbitration. The plaintiff claimed that only the fact whether the premises had been so altered as to infringe the policy should be so submitted. The Court at Liverpool, and afterwards the Exchequer Court, had left also a question of legal liability to arbitration. The Court of Appeal referred the case to arbitration on the facts only. The policy dated from May 20, 1836, and was made with Mr. Laurence Harwood.

BRADFORD.

CHEMIST CHARGED WITH PROCURING ABORTION.—Hezekiah Thornton, a chemist registered as in business before 1868, was tried last month on the charge of wilful murder

He had used instruments for the purpose of procuring abortion, and the patient had died. He was acquitted on the greater charge, but was immediately arrested on the minor charge of attempting to procure miscarriage. A petition has been got up to procure his release, and up to November 21 had been signed by more than 20,000 persons, "including several Bradford aldermen, councillors, medical men, solicitors, and chemists."

BRENTFORD.

STOWING GUNPOWDER AND EXPLOSIVES.—At the Brentford Petty Sessions on November 23 Messrs. Hayles Brothers, chemists, &c., Ealing, were charged with having gunpowder on their premises (about 30 lbs.) without "a brand, label, or other mark, showing in conspicuous characters the word gunpowder on the outermost receptacle." It appeared that there was no word "gunpowder" on the outer door of the stores, though the gunpowder itself was labelled. The Bench were of opinion that the Act under which the charge was brought referred to the sale only of gunpowder, and the case was adjourned that the Secretary of State might be consulted.

BRIDPORT.

CHEMISTRY OF EXPLOSIVES.—A young man named Neuth, on or about November 26, filled a tube with an explosive of his own manufacture, attached to it a safety fuse, lighted the fuse at a second-storey window, and threw the tube into the street. The explosion was heard at a distance of two miles. The police visited the spot, and were told that an experiment had been made on "an improvement on dynamite," which was to be introduced to the notice of the quarry proprietors of Bristol. The remainder of the material was given up, and the experimenter went to Weymouth, but he was followed by a summons to appear before the magistrate. He was fined 1*l.* and costs.

BRISTOL.

DEATH OF A PATENT MEDICINE TRAVELLER.—Mr. R. G. Parnell, a much-respected commercial traveller in the service of Messrs. Edwards & Sons, wholesale patent medicine vendors, died at the Royal Hotel, Bristol, on December 6, from taking, as it was supposed, an overdose of chloral.

CARDIFF.

CURIOUS CARELESSNESS.—Towards the end of November a Mrs. Cole, of Lower Grangetown, Cardiff, sent to a chemist for a powder to cure a pain in her head. The messenger led the chemist to believe that the powder was for external application, and being asked whether he would take a "white" or "red" one, chose the "white." The packet was labelled "Poison," but Mrs. Cole emptied its contents into a glass of water and drank it. Dr. Hughes, of the *Hamadryad* Hospital Ship, saw the woman sufficiently early to prevent her death, but she had a very narrow escape. This is not the first instance of persons poisoning themselves unintentionally after reading the label "Poison" on their medicine.

COCKERMOUTH (CUMBERLAND).

CATTLE SPICE ON SALE OR RETURN.—At the Cocker-mouth County Court on November 27, Mr. Atkinson, who is a manufacturer of cattle spice, residing at Kendal, claimed the sum of 11*l.* 18*s.* for 5 cwt. of cattle spice alleged to have been sold to Mr. Scafe in May last, and which the latter now wished to return, as he said he was unable to sell it. The defendant said that in May last the plaintiff called upon him and asked him if he did any business in cattle spices, when he replied that he had some on hand which he received from his predecessor, Mr. Muse, and therefore he did not want any. The plaintiff then asked permission to send some down to set out in front of his (defendant's) shop, because it was such a good position. The plaintiff said if he sold any of it he would appoint him as agent for it. The stuff was sent down on the distinct understanding that if he did not dispose of it the owner would get it sold and come and canvass amongst the farmers for a day; this he had never done. Mr. Muse, an assistant to the plaintiff, corroborated his master's evidence. The Judge considered it was not made out that the defendant had

ordered the goods, and in many cases he found that the sellers forced the goods on tradesmen in this way. The plaintiff was non-suited.

DEWSBURY.

REMARKABLE POISONING CASE.—On Sunday, Nov. 24, the whole family of Mr. C. Greenwood, of Highgate Road, Dewsbury, was taken violently ill. Mr. Clay, surgeon, found that they were suffering from the effects of poison. Three days afterwards all had recovered. The extraordinary circumstance in this case is the explanation given in one of the local journals. It is as follows:—"The family had been partaking of some Yorkshire pudding, and in this some eggs had been mixed up. It is believed that the fowls laying these had been poisoned, and that the poison, probably arsenic, had impregnated the eggs!"

DOVER.

DOVER CHEMISTS' ASSOCIATION.—The annual meeting was held at the Apollonian Hall, on November 13. Mr. W. H. Cotterell was re-appointed chairman, and Mr. J. Wilford (in place of Mr. J. I. Brown) was appointed secretary for the ensuing year. The principal business was the discussion of the probable bearings of the Weights and Measures Act. After January 1, 1879, the imperial pint of 20 oz. being the only legal pint, the chairman and secretary were requested to prepare a scale of prices in accordance with that change. A hope was expressed that Mr. C. K. Freshfield, M.P., would endeavour to protect the interests of the trade in the coming Session, as he had done in the past.

GLASGOW.

MESSRS. TENNANT & CO., ST. ROLLOX CHEMICAL WORKS.—On November 27 William Martin, a cooper employed by Messrs. Tennant & Co., endeavoured to recover damages from the Head Constable of the Royal Irish Constabulary in Glasgow, and a constable in the same force, for wrongfully apprehending the said William Martin, on September 30, and conveying him to the county of Antrim, Ireland, without any legal warrant. Another William Martin, native, like this one, of the county of Antrim, and also employed at the St. Rollox Works, was wanted by the Irish authorities, as he had deserted his wife. This one was taken over, when it was found that he was the wrong man. He was dismissed, and a sum of money was given him as compensation. The representative of the constables said he believed the present action was undertaken by Messrs. Tennant & Co. to deter the officers from doing their duty in future, as many men who had fled from Ireland had been taken from their service under similar circumstances. The Sheriff considered that it would be necessary to prove malice on the part of the constables, and the case was therefore withdrawn, with costs against the pursuer. The right to bring a new action was reserved.

On December 3, a man named William Deek stepped by mistake into a "well" containing a depth of 22 inches of boiling water. He was terribly scalded, and died next day from his injuries.

LINCOLN.

THE NEW MAYOR.—Mr. F. J. Clarke, chemist (of Blood Mixture fame), has been unanimously elected Mayor of this city. The retiring mayor (Mr. Cottingham) was also a chemist.

LIVERPOOL.

THE WILL of the late Dr. James R. W. Vose has been proved by his widow, in the Liverpool District Court of Probate, under 90,000*l*.

CURIOUS POISONING CASES.—The Liverpool coroner has had to investigate some singular poisoning cases. In one instance a chemist's assistant had brought home to his lodgings some prussic acid in a bottle labelled "whiskey" intending to poison a dog. An old charwoman, finding the bottle in the dog kennel, and tempted by the label, took her last draught. A few days after an inquest was held on a child three months old for whom a doctor had prescribed milk and lime water. The mother sent to the shop of Mr. Brown, chemist, 220 Great Homer Street, for a pennyworth

of lime water, and a boy who served gave paraffin oil instead. The child took some and died. The only explanation offered on the part of the chemist was that either immediately before or just after the application was made for lime-water some one in the shop called out for a gill of oil, and that this probably led to the mistake. The bottle which was sent was labelled "Lime-water." The jury returned a verdict of death through misadventure. They added to this verdict the opinion that the chemist had not exercised sufficient care in the matter, and recommended that every article sent out from a chemist's shop should be labelled. Mr. Teeling, the manager, said that it was not customary to label paraffin oil.

TRADE DEFENCE.—A general meeting of the chemists and druggists of Liverpool, Birkenhead and neighbourhood was held at the Royal Institution on Tuesday the 10th inst. Mr. Redford, President of the Registered Chemists' Association, occupied the chair, and in opening the meeting stated that they had been called together by the Executive of the Association to consider their position as chemists in relation to the adverse movements of the Apothecaries' Company. This was not the first time chemists had been called upon to defend their rights. There could be no doubt that the object of the promoters of the action of the Apothecaries' Company *v.* Shepperley was and is the curtailment of chemists' liberties in the free exercise of their business. They claim now no greater privileges than they have always exercised within the memory of the oldest man living—freedom to recommend remedies when applied to by customers in their shops, in the exercise of a discretion which, he maintained, had been for the most part a wise one. The attempt to impose rigid restrictions when the qualification of chemists has been raised, and is rising, and when they freely expressed their law-abiding feelings and intentions, he characterised as a most ungenerous return for uniform endeavours to further the ends and assist the members of the medical profession, and unworthy of the noble men who form the great bulk of that body. He was sure such men could not sympathise with this prosecution. The public have need of the services of chemists, but these should be exercised wisely, and with due respect for the moral rights of the profession, so as to cultivate that mutual trust and goodwill which would be the best defence. Chemists do not wish to add, by undertaking the treatment of disease, so anxious a care to their already over-burdened minds. It would be a public misfortune intolerable of sufferance should they be debarred by a rigid construction of any existing law, or the imposition of any further enactment, from the free and full right to carry on their business as by custom or legal right they had done in the past. He urged that moral and material support should be given to the Trade Association of Great Britain in defending the action, Apothecaries' Company *v.* Shepperley, to the utmost. He stated that the Committee of the Registered Chemists' Association at their last meeting, feeling the importance of the crisis, voted 30*l*. to the Defence Fund. After alluding to the refusal of the judges to grant a new trial, he called upon Dr. Symes, who, after describing the manner in which the chemists of 1815 were assured that the Act then sought by the apothecaries was in no way aimed at them, and corroborating points in the chairman's address, moved the following resolution:—"That this meeting repudiates any attempt to encourage or sanction encroachment by chemists on the legitimate province of medical men; but it recognises the justice of the late verdict in the Shepperley case, and regards with great satisfaction the earnest manner in which the Chemists and Druggists' Trade Association of Great Britain has withstood the attempt of the Apothecaries' Company to enforce oppressive measures for depriving the members of our fraternity of the legitimate rights and privileges which are enjoyed by every subject of this realm, namely, of exercising judgment in the conduct of business. It desires to render both moral and pecuniary aid to the said Trade Association in furtherance of its efforts in trade interest, for which object it now subscribes." This was seconded by Mr. R. Parkinson. Mr. J. Ball, of Oxtou, speaking in support of the resolution, alluded to the charge of incompetency of chemists to advise, whilst their assistants, going into the service of medical men, are employed to see and treat patients. He urged that, through being in abeyance for so

long a time, the Apothecaries Act had really become a dead letter. Mr. Fingland believed the press and the public were entirely with us. Mr. Abraham did not like the appearance of being a law-breaker, and maintained that the Apothecaries Act would have declared it plainly if its intention had been to alter the old custom of the trade. He desired more than the mere verdict of "Not guilty" in Shepperley's case; he desired a plain statement that our ordinary practice is not against the law. Messrs. Turner, Shaw, Woodcock, Wright, and Sumner also supported the resolution, which was carried unanimously. Messrs. Evans, Sons & Co., Messrs. R. Sumner & Co., Messrs. Clay, Dod & Case, Messrs. Raines & Co., and Mr. J. Thompson attended the meeting, personally or by representatives, and gave donations to the subscription list which was then opened. It was believed that the attendance was diminished by an erroneous impression that the refusal of a new trial had put a stop to the further progress of the case. A letter from Mr. Haydon, which was read to the meeting by the hon. secretary, Mr. B. Dickins, explained that this refusal in no way affected the pending appeal. Thanks were voted to Mr. Redford for presiding, and to Dr. Symes and Mr. B. Dickins for the organisation of the meeting, Mr. Shaw supporting the vote on behalf of the Executive Committee of the Trade Association. In addition to the donation of 30% from the local association, 60% was subscribed in the room. This will no doubt be augmented from members who were not present.

MANCHESTER.

"INFANT'S FRIEND," prepared by Mr. Pritchard, Charlton Road, Hulme, was held by a jury to have occasioned the death of a child five weeks old, the son of a housekeeper named Gradier. The deceased was a delicate child. Mr. Pritchard's assistant stated at the inquest that the "Infant's Friend" was not so strong as cordial or ordinary sleeping stuff.

NEWCASTLE AND TYNE DISTRICT.

LARGE reductions have been made during the month in the wages of the workmen in the chemical trade. The reduction has taken different forms. In some cases less money is being paid for the same amount of work; in others the men work more hours or turn out a larger quantity of material for the same amount of money; and in others the increased labour is paid for at a wage increased in a smaller degree.

FAILURE IN THE TYNE CHEMICAL TRADE.—Since the dull times commenced seven chemical works in the Tyne district have discontinued the manufacture of soda and alkali. Those that stopped earlier in the day are S. Mease & Son, East Jarrow; R. Frazer & Son, Jarrow; the Felling Coal and Iron and Chemical Company, and the Blaydon Chemical Company: the last continues to make manures, but manufactures no soda. Three works remain to be accounted for. Last month we announced the suspension of the old and reputable firm of merchants, Messrs. Knight & Son, London and Newcastle, with liabilities amounting to 100,000*l*. The great reduction in the price of chemicals was credited with the greater part of this loss. This stoppage has brought down the firm of Messrs. John Lomas & Co., of the Jarrow Chemical Works. At a meeting of the directors on November 12 it was determined to close the works. The capital of the company was about 100,000*l*, and has all been paid up. The dividend on the estate is not expected to exceed 5*s*. in the pound. The history of the concern is given in one of the local papers, from which we gather the following interesting details. Mr. John Lomas, with his uncle, Mr. Thomas Lomas, was first connected with the works now carried on by the St. Bede Chemical Company. He afterwards commenced works at Wallsend, close to those of the Wallsend Cement Company. The premises he erected were well laid out, and in a good situation. The Messrs. Cruddas joined him in partnership, but finally left him. In the meanwhile Messrs. Kenmir's works at Jarrow stopped, but Mr. Hood Henderson came forward and bought them. At the time Messrs. Cruddas were leaving Mr. Lomas the latter induced Mr. Henderson to unite the two works—Kenmir's and the Wallsend—and Mr. Thomas Bell, who was connected with the Walker Chemical Works, then standing idle, joined them, and a limited liability company, called John Lomas & Co., with a capital of about 100,000*l*, was formed to carry on the whole of the

three works as one company. A considerable outlay was made in the erection of new plant at Walker, but the place was found to be the least favourably situated of any of the three works for manufacturing purposes, and it was closed about three years ago. Some time afterwards a fire took place in the Wallsend Works, which were burnt, and these, too, were stopped, leaving only the Jarrow manufactory to be carried on, and now it in turn has been brought to a standstill. An idea of the work which the company carried on may be of some interest. While the three establishments were employed they decomposed from 300 to 400 tons of salt per week—about 150 tons of salt at Wallsend, 100 tons at Walker, and 100 tons at Jarrow; and made 80 tons of bleaching powder at the three places.

NOTTINGHAM.

MARRIAGE.—On November 14 a marriage was celebrated here between Mr. Gilbert Farie, pharmaceutical chemist, Bridge of Allan, and Miss Annie Haywood, of Shrewsbury House, Alexandra Park, Nottingham, daughter of Mr. J. S. Haywood, the well-known manufacturer of elastic stockings and other surgical appliances. The wedding occasioned much interest in Nottingham, and, amid a large party entertained in the evening by the father of the bride, were some 30 or 40 chemists of Nottingham, as well as medical men and a good many clerks, travellers, and others from his own factory.

PENZANCE.

SIR HUMPHREY DAVY.—The Penzance Corporation have decided to celebrate Sir Humphrey Davy's centenary on December 17, by organising an exhibition of scientific apparatus. A public meeting will also be held to consider the advisability of devising means to still further commemorate the event in the spring, when several English and foreign savants will be invited to attend.

PORTSMOUTH.

A CHEMIST VICTIMISED.—William Henry Spencer Courtney, 63, was committed for trial at Portsmouth, on November 27, for obtaining 100*l*. by false pretences from Thomas Job, chemist, of King's Road, Southsea. Prisoner had been paid the money on the false representation that he was negotiating for the purchase of the house in which prosecutor lived.

ROCHDALE.

ROCHDALE, BURY AND DISTRICT CHEMISTS' ASSOCIATION.—The chemists and druggists residing within the above area met on November 25 in the Mayor's reception-room, Rochdale, for the purpose of reviving the energies and extending the area of an existing association at Rochdale. A numerous meeting was presided over by Mr. W. A. Scott, who had been president of the Rochdale Chemists' Association, and who introduced the business by a brief reference to the history of the society which had called that meeting. A resolution was unanimously adopted to form the Rochdale, Bury and District Chemists and Druggists' Association. A code of rules was adopted and officers were elected for the ensuing year. The company then adjourned to the refreshment room, where a substantial tea was served and a deputation from the Manchester Chemists' Association, consisting of Messrs. Woolley, Benger, and Payne, joined the assembled guests. After tea Mr. R. Robinson, the president of the new association, delivered an address, founding his remarks on the recent trial of the Apothecaries' Society *v.* Shepperley. He warmly commended the Chemists and Druggists' Trade Association to the members, and, as a member of the Pharmaceutical Society, regretted the efforts made by the organ of that society to minimise the effect of the decision. He also advocated the separation of the duties of dispensing and prescribing. Mr. Alderman Taylor made some pleasant remarks, in the course of which he affirmed the impossibility of preventing druggists prescribing in simple cases. The opinion of the druggist was often solicited by the public on the action of either one medicine or another, and sometimes by medical men. Mr. Woolley spoke of the need of organisation as being greater than at a former period. Speaking on the subject of patent medicines, he strongly urged that a system so much open to abuse should be discouraged. Alluding to the way in which poisons could be sold in patent

medicine form, he said he knew that the proprietor of one of the nostrums to be administered to infants had bought no less than 1,000 oz. of morphia in one line. Mr. W. A. Scott made some severe strictures on the ignorance of medical men on the subject of *Materia Medica*. This, however, was understood to refer to a generation that was passing away. But those medical men who dispensed their own medicines were not remarkable for the extended variety of their *Materia Medica* as represented upon their shelves. Mr. Benger spoke on the subject of education, and Mr. Smith, of Radcliffe, returned to the counter practice question. Mr. Mercer thought it was the duty of the Pharmaceutical Society to support the action of the Trade Association in their defence of the rights of chemists and druggists as secured to them by the Apothecaries Act of 1815. Mr. Payne, of Manchester, also addressed the meeting, and a cordial vote of thanks was tendered to Messrs. Woolley, Benger, and Payne for their attendance, coupled with an expression of regret that Mr. W. S. Brown had not been able, owing to the state of his health, to form one of the deputation. The following resolution was then enthusiastically adopted:—

That we approve the action of the Chemists and Druggists' Trade Association of Great Britain, in the case of the Society of Apothecaries *versus* Shepperley, and hereby tender our sympathy, and resolve to give it our support.

Mr. Benger then exhibited and explained the telephone and microphone, after which a vote of thanks to the president terminated the proceedings.

ROTHERHAM.

BEQUEST.—Dr. E. J. Shearman, recently deceased, has bequeathed to the Mayor of Rotherham, for the use of the burgesses of Rotherham, all his philosophical and chemical instruments, and such books in his library as his wife and nephews did not choose to select from it. The Town Council requested the General Purposes Committee to consider whether the bequest should be accepted.

RUNCORN.

At Runcorn Police Court on November 25, Messrs. W. R. Earp & John Chaster, chemical manufacturers, were charged with sending dangerous goods from Runcorn to Flint and Newcastle-upon-Tyne without making known the nature of the same, contrary to the provisions of the Railway Consolidation Act. At Newcastle-on-Tyne Goods Station some of the liquid came in contact with the sawdust in which it was packed, and combustion ensued. Fined 40*l.* and 10*l.* costs.

SHEFFIELD.

PETROLEUM PROSECUTIONS.—On November 14 Samuel Pearson, druggist, Daniel Hill Street, was fined 10*s.* and costs for having vessels containing benzoline in his shop, the said vessels not being labelled "highly inflammable, &c.," in accordance with the Petroleum Act; and Wilson Tupholme, petroleum dealer, was also fined 10*s.* and costs for a similar offence in regard to benzoline conveyed by him for sale in Wincobank Lane on the 2nd ult.

CARR'S CHLORODYNE.—Referring to the chlorodyne dispute among the Sheffield guardians last month we noted the favour shown by the medical officers to Carr's product. Mr. Carr wrote to us as follows on November 22, 1878:—

Sir,—Upon reading your remarks on the above subject in this month's CHEMIST AND DRUGGIST, I infer, from the closing paragraph, you suggest collusion between the Medical Officers of the Sheffield Union and myself. I cannot give the statement a more emphatic denial than by informing you that I was only slightly acquainted with two of the doctors: the remainder were entire strangers to me; thus proving it was solely on the merits of the article supplied by me for the past four years that the medical staff advocated its continuance.

I remain, yours truly,

GEORGE CARR.

165 Devonshire Street, Sheffield.

SHREWSBURY.

TRADE DEFENCE.—A meeting of pharmaceutical chemists and druggists residing in Shrewsbury was held at the Lion

Hotel on December 3. Present: Mr. Alderman W. G. Cross, in the chair, and Messrs. Hickin, Payne, Salter, Pycfinch, Gouldbourne, Goucher, and W. G. Cross, jun. It was proposed by Mr. Goucher, seconded by Mr. Hickin, and unanimously resolved—

That this meeting cordially approves of the action taken by the Chemists and Druggists' Trade Association, in defending the legitimate right of chemists to prescribe for simple cases over their own counters. It is furthermore of opinion that it is desirable to use every means to maintain the satisfactory verdict recently obtained in the Exchequer Division of the High Court of Justice, in the case of the Apothecaries' Company *v.* Shepperley, to a final appeal before the House of Lords if necessary. And should the result of the aforesaid litigation prove unsatisfactory, it considers that a strong attempt should be made early in the next Parliamentary Session to induce legislation favourable to the repeal of the 29th section of the Apothecaries Act, 1815.

A subscription was afterwards opened for the benefit of the Chemists and Druggists' Trade Association, which was subscribed to by all the members of the trade residing in Shrewsbury, and amounted to 9*l.* 11*s.* 6*d.*

WHITTLESEY.

ADMINISTERING ARSENIC TO HORSES, &c.—At Whittlesey Petty Sessions, on November 14, William Gutteridge, labourer, in the employ of Mr. John Smith, farmer, King's Delph, was charged under Chaplin's Act with causing the death of eight horses and four beasts belonging to his master. A quantity of arsenic was mixed with the food given to the animals by the defendant with the supposed intention of beautifying their coats. The value of the horses alone was estimated at 600*l.* It was not shown that defendant administered the poison with wilful intent, and he was sentenced to a month's hard labour.

NAMES OF MEDICINAL PLANTS.

BY W. G. PIPER, F.L.S.

The Mistletoe.

The trees
O'ercome with moss and baleful mistletoe.

SHAKESPEARE, *Titus Andronicus*.

Now with bright holly all the temples strow,
With laurel green and sacred mistletoe.

GAY, *Trivia*.

IN former days the mistletoe, as its names will attest, was considered one of the most powerful remedies of the *Materia Medica*. It is possible that it will again come into notice, for last year Dr. Long recorded, in the *Louisville Medical News*, the result of twenty years' experience of its use in cases where ergot is generally employed. He speaks of it in the highest terms, as more prompt, certain, and natural in its effects than ergot. Its reputation as a remedy for the falling evil is not yet extinguished, as the formulae for epilepsy cures published in the June issue of THE CHEMIST AND DRUGGIST (p. 253) sufficiently prove.

Forgotten or not, the mistletoe is perhaps the most distinguished plant in our flora. Its name has been spelt in more ways than any other well-known word in our language.* Mistletoe itself has been a problem to etymologists, and there is the usual divergence of opinion on the subject. Prior thinks it means the "mixed" shrub, from its appearance, so different to its parent stock. Forby thinks *mislinbush* means the "golden bush," from a Saxon name of a kind of brass. Virgil speaks of it as the *ramus aureus*; a German poet has called it *die goldfärbte mistel*, and the Welsh have named it *pren aryr* or, "the golden branch." But this Saxon name itself means nothing but "mixed metal."

* Miscell, miscel, mistle, mistleto, mistletoe, misleto, misletoe, misseito, misseito, misletoe, misletoe, misseidline, misseiden, misseidline, misseishrub, mistleto, misleto, and mislinbush.

so at best this etym is only a step in the explanation. But in reality it means the "dung twig or shrub." The final syllable "-to" or "-den" corresponds to the Anglo-Saxon *tan*, "a twig." Mistle is derived originally from a Sanskrit word meaning "excrement." The name may possibly refer to the slimy mucilage surrounding the seeds, but more probably to the way in which the plant is propagated. The missel thrush or missel bird is really the mistleto thrush, and it is so named because of its great fondness for the berries. Like the nutmeg pigeon of the Spice Islands, which eats the nutmeg fruits, digests the pulp, and expels the seeds which we call nutmegs, sometimes carrying them many miles from the parent, the missel thrush, by eating the berries is the chief agent in preserving the species. Mr. Arnold Lees states that he has traced the plant in hawthorn trees for a long distance across the country, and he assumes that the thrushes, after eating the berries, have flown to other trees and wiped their bills upon the branches. But it is as possible, and more probable, that the seeds have been passed with undigested food, and have so obtained a lodgment on the branches. A Latin proverb current two centuries ago refers to this process, and to the use of mistleto in making birdlime—*Turdus sibi malum cecat*.

The genius of the English language seems to have been satisfied with varying the spelling of the word mistleto, for we have no other name for it in English. It shares, however, in the title "kissing bunch," but this is also applied to other evergreens. Before turning to other countries we ought to mention the seasonable practice this name refers to. It is purely English. The French, the Germans, and the Dutch know nothing of it; the Welsh, the Irish, and the Scotch never practise it. It seems to be almost recently introduced, for no notices of it have been found in the older works. Why it should be lawful to kiss any lady under the mistleto, not only once, but as many times as you can pluck a berry from the shrub, must be still a mystery. We can only suppose that it is a survival of the worship of Freya or Friga, the Scandinavian Venus. The story of the tragic circumstances which caused the mistleto to be devoted to the goddess was well told a few years ago in "Good Words for the Young," and may be read any day in "Mallet's Northern Antiquities" (Bohn's Library). We, therefore, need not repeat it here. Ancient oaks, on which the mistleto would probably be growing, were the favourite trysts of lads and lasses, and though such exences are but little needed at such places, the mistleto may have given the sanction of the goddess to the kissing, and the kissing may have helped to keep the mistleto in remembrance.

Viscus or *viscum* is the Latin name for this plant; botanically it is distinguished as *Viscum album*. It is sometimes difficult to separate the meaning of *viscus*, the mistleto, from *viscus*, glue or birdlime, for making which the mistleto was formerly esteemed inferior only to the holly. And the word *viscera*, which is connected with them both, points to the original meaning of all three. *Vish* is the Sanskrit root, meaning to "separate or disjoin." One of its numerous derivatives is *vishta*, "stercus, excrement," and thence comes *viscum*. With *viscum* is connected a long series of words. The *iks*, *iksos* and *iksia* of the Greeks, called *biskos* in the Boeotian, and *fiskos* in the Arcadian dialect; the Italian *vischio* and the Portuguese *visgo*, are all related to it. The French is *gui*; in the Berry dialect this is *guè*, in Norman *ri* or *ri de pommier*; in Aube *ari* or *havi*, and in Manche *ri*. The Celts or Gauls are said to have called the plant *visca* and *viscus* (Bullet, "Mem. sur la langue Celt"). *Gwysgyls* is the Welsh representative of the same word.* *Gwysgelyd* and *gwysgonlys*, also Welsh, are probably connected with it. *Guis*, an old Erse name, means "mistleto" when a noun, and "viscous" when an adjective. In parts of Prussia the plant is called *vispe*, which may be connected with *viscum*, though it is more probably related to the *vespelt* of West Gothland, which, according to Grimm, means "holy wheat." This name is rather obscure. The dedication of the plant to Freya, or its worship by the Druids, may account for the epithet holy, but the connection of the plant with wheat is not easy to trace. Boeck, a German botanist of the 16th century, states that in times of scarcity poor folk have gathered, dried, and

powdered the plant, and, mixing it with rye-flour, have made a not unwholesome bread.

Trollope tells us that the plant is called in Breton *Lou-zou-ar-groas*, "herb of the cross, and that the Breton peasants put a branch of it in their pockets when they start on a carousal. In Normandy at the present day a branch of this "sacred plant" serves as a sign for the drinking-houses (*cabarets*), and "with an apple placed amongst its golden branches it announces 'new eider'" (Lehéricier, "Flore Populaire du Normandie"). In the department of the Aube it is called *Enseigne de cabaretier*.

Vert de pommier (the greenness of the apple-tree) is Norman, perhaps to relate to *verquet*, another name in provincial French. Connected with it in idea is the Breton *dour-dero* or *deur-derr*, water or juice of the oak,† and the Erse *sugh-darach*,‡ sap or juice of the oak. In German common name for the parasite is *affolter*. This is also applied to the guelder rose. It is spelt, when applied to the mistleto, *apfolter* and *afholder*, and in old High German the corresponding words are *affoltera* and *apholtera*. The word is exactly equivalent to the English "apple-tree." Apple is a word found in almost every Aryan language, and means literally the "water or juicy fruit."

Brou, a name in use in the Departement de l'Aube, really means the cuttings of hedges, which are given to goats, and has been applied by extension to the mistleto, of which those animals are very fond ("Stanilas des Etangs in Mem. Soc. Agric. de l'Aube"); cattle, deer, and sheep also eat it with avidity. Tusser (1557), in "Januaries Abstract," tells the farmer to "Give sheepe to their fées§ the mistle of trées," and in "Januaries Husbandrie," "From everie tree the superfluous bows—now pruee for thy neat thereupon to go brows . . . If snow doo continue, sheepe hardly that fare—crave mistle and ivie for them for to spare." In Worcestershire, on New Year's Eve, the mistleto bough, which has hung the year through, is taken down to make room for the new one, and the farmer sometimes gives this bough to the first cow that calves after New Year's Day. This will ensure luck to the whole dairy. Pliny and Theophrastus both recommend its use for fattening cattle when better materials are scarce. They add that it must be used with care, for it sometimes acts as a dangerous and violent purgative. It has been said that the mistleto preserves from the rot all sheep that feed upon it. The keepers at Cranbourne Chase were accustomed to strew the feeding-grounds of the deer with mistleto during the two or three months preceding Martin-tide (November 11). This caused the does to slip their fawns, and enabled the keepers to secure a supply of animals suitable for the annual hunts. The plant is said to have a similar effect on bitches, and Dr. Long states that he was led to experiment on its power of hastening delivery by noticing that in the part of the United States where he formerly practised, the farmers were in the habit of giving the mistleto to such of their domestic animals as failed to "clean themselves," or expel the placenta after delivering their young.

Space compels us to stop here, although many curious names and fancies remain to be mentioned.

PRELIMINARY PAPER ON CHAULMOOGRA OIL.

By JOHN MOSS, F.C.S., LOND. ET BER.

CHAULMOOGRA OIL is not absolutely new to English pharmacy, but, until very recently, knowledge of it was confined to perhaps half-a-dozen pharmacists and as many physicians. Nine months ago Mr. R. C. Lepage, a gentleman who has resided many years in India, where he became acquainted with the oil and its use, published a compilation

* *Louzu* is the plural of *louzaouenn*. *Louzaouenn-ar-groas*, properly speaking, is the name of the vervain, *Verbena officinalis*, which is also called *kroazik*, the "little cross."—Troude, "Dict. Breton."

† Eider is called *dour aval*.

‡ The "gh" is silent.

§ Reward, pay.

* *Lys* is Welsh for "plant."

of what had up to that time appeared on the subject in standard publications.* His pamphlet has been an important means of directing attention to Chaulmoogra, and as the remedy is now on trial, both in hospitals and private practice, inquiries have arisen from many quarters, which render it desirable that the chemical history of the product, hitherto almost a blank, should be proceeded with. Besides describing the preliminary experiments I have made upon the oil, I give certain industrial facts and information as to exhibition and mode of use, which have not to my knowledge yet appeared in print.

Industrial Facts.—For these I am indebted to Mr. Lepage. The plant (*Gynocardia odorata*, R. Br.) abounds in districts about the Lower Himalayas approaching Sikkim, and the seeds are collected there in December and sent down to Calcutta. The outer integument is removed, and only the nucleus with the endopleura is treated for oil, during a period which may extend from December to the end of February. The best yield, 10 per cent., is obtained from the fresher seeds in December. Two processes are employed, pressure without heat being considered to yield an oil having the best keeping properties.

Description.—At ordinary temperatures the oil is a granular solid, not unlike beef dripping in appearance and colour, but of a firmer consistency. At a slightly elevated but not warm temperature it begins to liquefy, and the pale granular part of which it chiefly consists is thrown into relief by the amber-coloured fluid portion of lower melting point. The oil melts at 42° C., and at that temperature has a specific gravity of .930. It is most capricious in solidifying, sometimes doing so as the temperature falls, and not unfrequently refusing to become solid for hours, or even days, after this has taken place. This character of the oil is very marked if it be melted with ozokerine, and the mixture is stirred until cold; it refuses to solidify, though if the two be mixed in a mortar, or with a knife on a slab, a smooth ointment results of good consistency. The oil has an acid reaction, a slight persistent acrid taste, and a faint smell recalling virgin scammony.

Mode of Exhibiting and Use.—The oil being given internally, as well as used externally, the mode of administering it is a subject of importance. Being a solid in our latitude, it must be melted before measuring out the five to 15 drops forming a dose, which is sometimes taken on sugar. Here are two objections. In the first place, this, like other alterative medicines, has generally to be taken for a considerable period, and to warm the bottle regularly three or four times a day in order to get out the dose, besides being inconvenient in itself, is trying to the patience; in the second place the unpleasant taste and smell remain without amelioration. To obviate these objections, which every pharmacist knows are practical difficulties in the presentation of a remedy, I would suggest that the chaulmoogra be given in the form of capsules or perles holding the minimum dose—from three to four grains. In this form the dose is already divided, and neither taste nor smell can be perceived by those taking it. For external application the oil is already in a convenient form, and for the ease and smoothness with which it rubs over any surface where this mode of using it is permissible, it has been likened to goose grease. To parts which are very sore, and hence cannot be rubbed, it should be softened by warmth and applied lightly with a soft brush. A more economical way of using the chaulmoogra is in the form of ointment, and a satisfactory formula for this is as follows:—

	Parts
Oil. gynocardiae	2
Paraffin wax (106° Fahr.)	1
Ozokerine	5

CHEMISTRY OF CHAULMOOGRA.

Dymock's Reaction.—The chemical history of chaulmoogra was commenced in the pages of the *Pharmaceutical Journal* in March, 1876, by Dr. W. Dymock, of Bombay. His experiments there described had the very laudable object of discovering a test by which the genuineness of chaulmoogra oil could be determined. In the

opinion that such a test was necessary, Dr. Dymock is supported by the *Pharmacopœia of India* (p. 26), which states, "The oil procured from the bazaar is usually impure," and by Dr. Mouat,* who says, "The oil procured from the bazaar is invariably impure." Dr. Dymock believes that he has found such a test in proceeding as follows:—Twenty minims of the melted oil are placed in a watch glass and one minim of sulphuric acid B.P., is added; on stirring with a glass rod, a bulky, tenacious, resinous mass of reddish brown colour is formed round the drop of acid, and the oil, after having been stirred a few minutes, turns of a rich olive-green colour, the resinous portion all the time remaining separate, and retaining its colour and transparency; this was with a cold-drawn oil. Proceeding similarly with an oil prepared by boiling the seeds in water, he obtained at first a burnt sienna colour, and afterwards the rich olive green, but no resinous mass was formed. He applied the same test, with a negative result in each case, to several animal fats and to various vegetable oils of Indian production, namely, ground nut, cocoanut, sesame, linseed, and castor oil. To these must be added poppy oil. I have applied this test to samples of chaulmoogra obtained from both the east and west coasts of the Indian peninsula, three of them of accredited purity, and as my results agree in the main with Dymock's description of his own, that gentleman may fairly claim to have discovered a reaction which is characteristic of the oil, and which, taken in connection with physical characters, may be used as a test of its genuineness.

This, then, is the point where I take up experimentally the subject of the chemistry of chaulmoogra, and I now give the results of a preliminary examination, undertaken with a view to obtain indications of the direction in which more particular investigation would lead to the most interesting and valuable results.

The melting-point of the oil is 42° C., and it may be cooled down to the temperature of the atmosphere without signs of solidifying. The specific gravity is 0.930 at 42° C. Dymock gives it as .900, but names no temperature, and an expression in his paper leads me to think that he had not the best appliances for such a determination. The oil has a decided acid reaction.

Behaviour with Solvents.—Half an ounce of it was agitated with three fluid ounces of each of the following liquids, with the results stated:—

1. Water, warm.—Frothed freely, separated into an oily layer which coagulated on cooling, and a milky emulsion from which white flakes separated.

2. Alcohol .807.—A thick oily layer remained undissolved; this was scattered over with brownish flocks. The solution had an acid reaction.

3. Ether .720.—Grey flocculent matter remained undissolved; solution acid.

4. Chloroform.—Entirely dissolved except a brownish flocculent dust; solution acid.

5. Carbon Bisulphide.—Entirely dissolved except a grey flocculent dust; solution acid.

6. Benzine .872.—Entirely dissolved except a brownish flocculent dust; solution acid.

Solutions 4, 5, and 6 were set aside, as also was No. 3, after the grey flocculent matter had been collected in a filter and washed with ether. The quantity would not be more than a grain. It carbonised very slightly when ignited, and the residue was found to be a lime salt. Experiments 1 and 2 appeared more promising, and attention was given to them accordingly, No. 1 being first proceeded with. The oily layer in this was agitated with two further similar quantities of warm water, and when cool separated by filtering. With the third agitation there was no frothing. The emulsion was neutral to test paper. On evaporating below the boiling-point the emulsion was progressively broken up, and aggregations of oily drops formed on the surface. These aggregations readily solidified. The liquid was now strongly alkaline. Sodium and potassium were detected by the flame test, and the residue, after ignition, was found to contain lime. In repeating the experiment on a larger scale, it was deemed advisable to pass the oil, of which a pound was used, through paper, so as to intercept the sometimes flocculent, sometimes dusty matters observed in all the experiments except No. 1. On examination this was found to

* Papers on the plant *Gynocardia odorata*, from which the Chaulmoogra oil is obtained. Compiled from various sources by R. C. Lepage, late of Calcutta.

o "Indian Annals of Medical Science," April, 1854.

contain oxalate and phosphate of calcium with a considerable proportion of vegetable tissue; other salts and albumen are possibly present, but the analysis is not yet complete. The emulsion obtained by agitating the filtered oil with water is also under examination at the present time, and as the phenomenon of frothing with water is not usual with oils I look to the results with interest.

The reaction of the oil in No. 1 was still acid and the taste unaltered, but as the chief interest in this experiment centred in the emulsion, the former was set aside and attention directed to No. 2, in which it would seem that alcohol had effected a division of the oil. This, indeed, was found to be the case. The alcoholic solution was removed from the undissolved oil, and the alcohol expelled from each portion by warming. The soluble part had a strong acid reaction, and the characteristic smell and acid taste of the oil were present in an emphasised degree. The undissolved portion was neutral and bland, with only a faint and fugitive odour, and when cold was not so firm as the soluble part. Dymock's test was applied to each of the separate oils. The soluble oil became uniformly dark red brown, almost black, remaining quite smooth and homogeneous. After some minutes the surface became dark bronze, or olive green, the under portion remaining red brown till exposed to the air. The undissolved oil became pale green almost immediately, but by far the larger part of it was converted into a brown or black elastic mass; the green colour here would seem to be due to imperfect washing with alcohol. To remedy this more alcohol was used of the same strength as before, just enough warmth being applied to liquefy the oil. After agitating, an oily layer separated as before, below a liquid which was clear at first, but which on cooling deposited opaque white flakes. The alcohol with the flakes suspended in it was run off into a dish, and the operation was repeated with fresh alcohol until nothing remained undissolved but a slight coloured crust adhering to the surface of the bottle, and resembling only the brownish flocculent dust undissolved in experiments 4, 5, and 6. The dish with its contents were now subjected to gentle heat, that the alcohol might be expelled; the residue when cold presented an appearance altogether different from the opaque granular fat with which the experiment was commenced, and different also from the portion which the first treatment with alcohol failed to dissolve. It was solid and translucent though granular, and the bottom of the dish was visible through the half-inch layer which covered it: no indication of bloom on the surface was perceived after a month. Dymock's test gave the same reaction as before. The black elastic mass is evidently produced by dehydration and carbonisation of the oil or one of its constituents, and does not pre-exist in the oil, as suggested by Dymock.

Fatty Acids.—5.948 grammes of the oil were now saponified by boiling with potash lye, and the soap decomposed by hydrochloric acid. The fatty acids were separated and washed, and when dry were found to weigh 4.825 grammes or 81.11 per cent. The product was hard and opaque, and after a time, a white bloom, similar to that observed on Japan wax, spread over the surface. Dymock's test was applied, and the fine green colour soon made its appearance; the mixture remained granular. The reaction is, therefore, presumably due to an acid, and possibly to the acid which exists free in the oil, and which is soluble in alcohol. In order to determine this point it is necessary to prepare a quantity of the acids, for there are more than one, and separate them by fractionation. This has been done to a certain extent, and experiments are now in progress; when the results are complete they will be incorporated in another paper. These further experiments have for their object, not merely the discovery of which proximate principle gives Dymock's reaction, though I regard that as most important, but also the determination of the composition of the oil, either by showing that it consists of bodies with which we are already acquainted, or by showing that some new principles are present. I regard Dymock's reaction as important because it is obviously due to a characteristic and peculiar proximate principle, which is probably also the active principle.

THE "YEAR BOOK OF PHARMACY FOR 1878" is just ready, but has only been received in time to be acknowledged in this number.



SOCIETY OF APOTHECARIES v. SHEPPERLEY.

THIS case was, on December 5, brought before the Lord Chief Baron and Baron Pollock, sitting in banco in the Exchequer Division of the High Court of Justice at Westminster. It was an action brought by the Master and Wardens of the Apothecaries' Society of the City of London against a pharmaceutical chemist residing in Nottingham, to recover two separate fines of 20*l.* each under the statute 55 Geo. III. ch. 194, on account of the defendant having practised as an apothecary without having obtained the necessary certificate. The defendant pleaded, among other things, that if he had acted as an apothecary he had only done so as a chemist and druggist, prior to the passing of the Act, and that he was therefore entitled to the exemption of Section 28.

The case was tried before Baron Pollock and a special jury at Westminster, on November 7, and after a trial, which occupied a little more than one day, a verdict was entered for the defendant and judgment given accordingly.

Mr. DAY, Q.C., on December 5, moved their lordships on behalf of the defendants for a rule for a new trial upon the grounds that the verdict was against the weight of evidence, and that the learned judge had misdirected the jury. An application had been made to the Court of Appeal, but it was impossible to say when that would be heard. The action, said the learned counsel, had been brought in point of form to recover penalties, but really and truly to determine a question of very considerable importance which had arisen upon the construction of the statute 55 Geo. III. ch. 194. At the trial the substantial question was whether chemists and druggists, not being members of the Society of Apothecaries, were entitled to prescribe for what was termed "simple complaints."

Baron POLLOCK: The question was simply whether or not the defendant acted in contravention of the statute by prescribing as an apothecary. There is not a word in the statute as to the distinction between simple and serious complaints.

Mr. DAY said he was pointing out what was the case put forward on behalf of the defendant by his counsel at the trial, and in the statement of defence. The question at issue really turned upon the proviso to Section 20 as contained in Section 28.

LORD CHIEF BARON: What did the learned counsel for the defendant mean by prescribing? Did he refer to verbal or to written prescriptions?

Mr. DAY said he referred to both, to prescribing directly or indirectly, by word or mouth or by writing. The substantial point, however, by the defendant was, that prior to the passing of the Act, chemists and druggists were in the habit of treating simple complaints, and that, having been in the habit of doing so before the passing of the Statute, their right to continue to do so was preserved by Section 28. The Act under which the action was brought was passed for the better organisation of the Society of Apothecaries, and contained provisions as to the examinations of each person seeking to practise as an apothecary, and also as to the penalties to be imposed upon persons who, not having passed such examinations or obtained a certificate, should practise as an apothecary. But the learned counsel for the defendant had maintained that while the Act bore such a construction, yet that Section 28 permitted chemists and druggists to continue to carry on their trade as it had been conducted prior to the passing of the Act, although it might have included some of the acts of an apothecary. He contended, however, on behalf of the plaintiffs that the business of a chemist and druggist, as referred to in Section 28, was confined to the "buying,

preparing, compounding, dispensing, and vending drugs and medicines and medicinal compounds wholesale and retail," and that all acts outside such a definition fell within Section 20, and were not liable to exemption. Under Section 28 the apothecary was himself entitled to treat the sick, and although the duty of compounding medicines was still imposed upon him, chemists and druggists to a considerable extent since the passing of the Act had dispensed physicians' prescriptions, that was to say, it was not usual for prescriptions to be taken to apothecaries, but to chemists and druggists. The chemist, however, now went further in the present case and said he was entitled to look at a patient himself and to see what was the matter, and if it was a simple complaint, involving no great medical knowledge, that he was at liberty to treat it himself. The plaintiffs, on the other hand, held that the chemist was not so entitled to treat patients, so far, at least, as to practise the business of an apothecary without having obtained a legal certificate. That was substantially the question at issue between the parties. Section 20 imposed the penalty upon a person who practised as an apothecary without having the certificate; and Section 28 contained the proviso that "nothing in the Act shall prejudice or interfere in any way to affect the trade and business of chemists and druggists in buying, preparing, compounding, dispensing, and vending drugs, &c.;" and he now urged that the exemption sought for by the defendant was confined to the carrying on of the business of a chemist and druggist, so far only as it related to such acts described in Section 28. It was contended, however, that, as before the passing of the Act, so after that event, chemists and druggists were entitled to treat simple cases, and did so as a custom in the trade.

Baron POLLOCK: That point was never pressed at the trial.

Mr. DAY replied that a witness was called for the purpose of proving it.

Baron POLLOCK: I stopped all that entirely and left the case to the jury simply upon my construction of the statute, which I believe was more favourable to the plaintiff than my brother Cleasby put it on a previous occasion. The question left to the jury was whether the defendant in the case had done that which brought him within Section 20, as limited by Section 28. I told the jury that the true construction of the section was that the words "same trade" meant the carrying on of the trade of a chemist and druggist only in the "buying, preparing, compounding, dispensing, and vending drugs." There was no question as to simple or serious complaints.

Mr. DAY said the contention on the part of the defendant at the trial, as well as the evidence given on the part of the defendant, went to show that what the defendant claimed was to be entitled to treat for simple complaints. He did not complain of his Lordship's summing up of the evidence, but he maintained that the learned judge had left to the jury that which, as a point of law, his Lordship should have determined. The learned counsel proposed to read some passages from the summing up of the judge in support of his contention.

Baron POLLOCK: How do you say I ought to have directed the jury?

Mr. DAY: That on the evidence the defendant had acted as an apothecary.

Baron POLLOCK: How could I have told the jury that? Supposing they disbelieved your clients' case, do you say that it would have been fair so to direct on the defendant's own evidence.

Mr. DAY: Certainly, my Lord.

The LORD CHIEF BARON said he had not the evidence before him.

Mr. DAY replied that he did not propose to read the evidence, but only some portions of the learned Baron's summing up.

Baron POLLOCK said it would perhaps shorten the case if he read to the Lord Chief Baron what the defendant had said. He then read over Mr. Shepperley's evidence as given before him, and mentioned one or two of the points of the cross-examination. The evidence stated that after Death had shown his throat and asked for something for it, the defendant said, "Perhaps a saline mixture might answer." If he had said nothing, but after looking at the

throat had given a saline mixture it would have been a different thing.

Mr. DAY said there was another case brought forward, but he did not rely much upon it. The learned counsel then proceeded with his argument. As to the definition of an apothecary, and which clearly included the acts of the defendant, he knew of no better one than that given by Mr. Justice Cresswell in the case of the Apothecaries' Society v. Lotinga (vol. 2, Moody & Robinson, p. 499). His Lordship said:—"Now I apprehend that an apothecary is a person who professes to judge of the internal disease by its symptoms and applies himself to cure the disease by medicines." Now, what had the defendant done in the present case? The customer who came to him complained of a sore throat. Of course a sore throat might be the forerunner of a great many diseases. It might be a trifling matter, but at the same time it might be the commencement of a serious disease. The defendant looked into the sore throat and said the customer was suffering from that complaint, and judging what was its character, he prescribed for it. The defendant so "professed to judge of internal disease by its symptoms" as he looked into the throat with a view to diagnosis. He administered a compound medicine which might vary according to the character of the disease, and hence the danger against which it was intended to guard. Such a disease might appear at its first sight to be of a simple nature, but if treated by unskilful and unqualified persons might be much aggravated in its form and lead to serious consequences.

Baron POLLOCK: The doubt in my mind is this. It would be a very strange thing for a judge in the case of an action for penalties to tell the jury upon the evidence that they must find a verdict for the plaintiffs if, in any reasonable aspects of the case, the jury might feel it their duty to come to a verdict for the defendant.

The LORD CHIEF BARON: What would you have a man do in the position of the defendant, even if he had made up his mind to the best of his ability to observe the Act so as not to treat as an apothecary? What is he to do if a man comes into his shop, exhibits his throat, and says, "I have a sore throat." Is the chemist to pretend to know nothing about it, and for fear of incurring a penalty to turn the man out of his shop?

Mr. DAY said he should not carry the case any further than he had done. The facts had been fully stated to his Lordship by Baron Pollock.

The LORD CHIEF BARON: What question would you have left to the jury?

Mr. DAY submitted that no question should have been left to the jury at all, but they should have been directed to find for the plaintiffs for the full amount claimed.

The LORD CHIEF BARON: By the facts of the case it appeared that the defendant apparently divined the object of his would-be patient, and exhibited great reluctance before treating the case. When pressed to do so the defendant only examined the throat of the informer, and prescribed a trifling remedy, suggesting that a saline mixture which he gave him might perhaps do the informer good, believing at the time there was nothing the matter with him, and thus there had been no *bona fide* treatment at all. The Court was of opinion that no rule should be granted.

Motion refused accordingly.

THE VIOLET POWDER QUESTION.

At the Salford Hundred Intermediate Sessions on December 3, before Mr. W. H. Higgin, Q.C., chairman, and other magistrates, the case of "Samuel Gill and another v. Charles Leigh Clare and another" was taken. This was an appeal against a conviction by two justices of Salford, dated July 19, for an offence created by Section 6 of the Sale of Food and Drugs Act, the penalty imposed being 1*l*. Mr. Nash and Mr. Bradbury appeared to support the appeal, and Mr. Jordan, with whom was Mr. Sutton, represented the respondents.

Mr. Jordan, in opening his case in justification of the conviction, said that the conviction arose out of the purchase of a well-known article called violet powder. The section under which it took place provided that "no person shall sell to the prejudice of the purchaser any article of food, or

any drug which is not of the nature, substance, and quality of the article demanded by such purchaser, under a penalty not exceeding 20*l*." Three points would have to be settled in the case in order that this conviction might be sustained. The first question was, Was the article with which they had to deal a drug within the meaning of the 6th section? He proposed to show, by references to the Act of Parliament and by evidence that it was. The second section of the Act explained that the term "drug" should include medicine for internal and external use; and it would be proved that violet powder was a well-known article used by medical men and others as a medicine for external application. The second point arising was as to whether the sale was to "the prejudice of the purchaser." It would be contended by the appellants that, because the purchase was made for the purpose of analysis and not for the purpose of use, the offence, if any existed, did not come within the meaning of the Act, for there could be no prejudice to the purchaser. But it clearly appeared from the 13th and other sections that the inspector appointed to carry out the Act was the person intended to take proceedings in order to bring offenders to justice. If this were not so the Act would be simply nugatory. It certainly must have been contemplated by the Legislature that, although the article was purchased for analysis and not for use, prejudice should be presumed if the purchaser did not get the article he was entitled to expect. Mr. Justice Lush, in the appeal case of "*Sandys v. Markham*," in the Court of Queen's Bench, held this view. Then came the question, Was this violet powder "of the nature, substance, and quality demanded"? That would depend upon whether there was in the market a well-known article sold under the denomination of violet powder. No doubt there was, and it was made from starch. It was largely used as a medicine for external application, being beneficial in cases of tender skin. The other side would say that although there was an article in the market called violet powder, which was made of starch, yet the real violet powder was made of sulphate of lime.

Mr. Nash: We never said that that was the real violet powder.

Mr. Jordan, continuing, said that sulphate of lime was not of the "nature, substance, and quality" of violet powder. A ton of the real violet powder was worth 30*l*., whereas a ton of sulphate of lime was worth only 1*l*. He should be surprised to hear any medical gentlemen say that sulphate of lime had been sold or used to their knowledge as a violet powder, or as a medicine for external purposes. On the contrary, when applied to infants this substance was an irritant. The learned gentleman then detailed the facts of the case upon which the conviction was founded, mentioning, in doing so, that the appellants carried on business as druggists in Broad Street, Pendleton. In conclusion, he said that after having called evidence he should invite the court to find as matters of fact—first, that the article in question was a "drug" within the meaning of the Act; second, that it was sold to the prejudice of the purchaser; and third, that it was not of the "nature, substance, and quality" demanded.

Mr. Nash thought Mr. Jordan wanted to put him out of Court in the event of the matter going to a higher tribunal.

The evidence of Mr. Joseph Thompson, deceased, given before the respondents, was then read. It proved the purchase by him, as inspector for Salford, of the powder from the defendants, and its submission for analysis.

Mr. Nash drew the attention of the Court to several points in this evidence which he considered of importance to his clients. These were: The inspector made the purchase by direction of Mr. Carter Bell, analyst for Salford, and Dr. Tatham, medical officer of health for the borough; he did not buy the powder for his baby, but for the purpose of analysis, and he had not the slightest idea what the stuff was to be made of.

Joseph Carter Bell, Fellow of the Chemical Society, and public analyst for Salford, deposed that the sample of violet powder, purchased of the appellant by Thompson, was submitted to him for analysis. It was composed of 80 per cent. of sulphate of lime and 20 per cent. of sulphate of calcium. There was no starch in it. He had frequently made analyses of violet powder. It was generally made of starch, sometimes mixed with orris root. Particles of starch were soft;

particles of sulphate of lime were angular, and if rubbed on the skin would produce irritation.

Dr. Thomas Stevenson, public analyst for Surrey, stated that violet powder was an article well known to the medical profession as being composed of starch, with a little orris root or some other scent. It was generally applied externally to infants. Sulphate of lime would be very much inferior to starch in the case of excoriated surface. Violet powder containing that mineral would produce irritation.—Under cross-examination, he said he should be very much surprised indeed to hear that a ton of such powder as was sold by the appellants had been sent to India, and that the Begum of Kolapore "doted" on it. He had seen no violet powder containing sulphate of lime. It was generally compounded of two things—starch and a little scent.—In re-examination, he said that all the samples of violet powder he had obtained from barbers and perfumers contained sulphate of lime; those he had obtained from druggists did not.—Replying to the Chairman, he stated that a powder containing 80 per cent. of sulphate of lime would cause irritation where there was an excoriated surface.

Dr. Tatham, Medical Officer of Health for Salford, gave similar evidence. In answer to Mr. Nash, he said he had not heard of any complaints about injury being caused by this particular powder.

Joseph Alfred Wanklyn, Professor of Chemistry at St. George's Hospital, London, also gave evidence for the respondents. He never heard of violet powder being made of sulphate of lime before.—Under cross-examination he admitted that he should not be surprised to hear that this powder of the appellants had been sold for 20 years without causing any injury; but he should be surprised if it were the fact.

The Chairman: If you went to a shop and asked for a packet of violet powder, what would you expect to get?

Witness: Pure, or slightly scented starch.

Dr. A. Walituch, of Manchester, was also called. He had never known sulphate of lime used or prescribed by any medical man for any therapeutic purpose whatever.

This was the case for the respondents.

Mr. Nash, in opening the case for the appellants, submitted, to begin with, that this violet powder was not a drug within the meaning of the 6th section, unless the particular object for which it was wanted was stated. If it was a drug, it was a compound drug, as the witnesses already called had stated; and if it was a compound drug, this prosecution had been instituted under the wrong section of the Act. With regard to the matter of prejudice, it was the essence of the offence that the purchaser should be prejudiced. The remark of Mr. Justice Lush was made in a case which was not decided: and they all knew that something like half a dozen cases had been granted upon a remark made by the Lord Chief Justice in the case of *Sandys v. Small*. The High Court of Justiciary in Scotland had decided this point in the way he contended for. The mere fact that, if the view upon which he insisted were taken in this matter of prejudice, it would render the Act nugatory was no argument when it was remembered how Acts of Parliament were drawn up nowadays. In answer to his friend's point that this particular article was not of the "nature, substance, and quality demanded by the purchaser," he urged that there was no standard of preparation for violet powder, and a man could be no more prejudiced in the purchase of a quantity of it, made in a particular way, than he could be in the purchase of such a thing as an Eccles cake. Evidence would be adduced to show that the article which the appellants sold was manufactured, not for the sake of palming off an inferior article upon poor people, as starch, but because of a genuine demand for it on the part of the public, who preferred it to starch powder. He was proceeding to argue upon the question of injury, when

The Chairman intimated that the Bench did not think the question of whether the powder caused irritation or not had anything to do with the case.

Thereupon Mr. Nash adduced evidence with regard to other points.

Alfred Bird said he was a partner in the firm of Alfred Bird & Sons, manufacturing and wholesale chemists and druggists, 69 Worcester Street, Birmingham. They had carried on business for 42 years. They were the makers of the violet powder under the notice of the court. It was sold

under a trade-mark—a steamer over a globe—which was used to distinguish it from other makes. They had sold the powder during the last 20 years, and latterly had had a very extensive demand for it—about a ton per week being sent out. This quantity represented 36,000 1-oz. packets. They had never had any complaints about the powder. They made also starch powder, but they sold 50 times less of this than of the other. There was no recognised formula for violet powder. It was made in a number of different ways. Up to within the last six months he had never met with a penny packet of violet powder which contained starch powder. The basis was generally sulphate of lime, in the proportion of about 75 per cent. He considered that sulphate of lime was a suitable material to make up into violet powder. Violet powder was not a drug, or it would appear in the British Pharmacopœia. He considered it to be a cosmetic.—By the Chairman: If he went into a shop and asked for a packet of violet powder he should expect to get a powder made either of starch or sulphate of lime. There was nothing in the name of the powder to indicate its nature.—Re-examined: They put into their powder, besides sulphate of lime, essential oil and a large quantity of powdered French chalk. The amount of profit per packet they obtained upon this particular kind was, proportionately, exactly the same as that obtained upon the starch powder.

Dr. Theophilus Redwood, public analyst for the county of Middlesex and editor of the "British Pharmacopœia," stated that that work was the official authority in pharmaceutical matters. He was well acquainted with the articles sold as violet powder and with the purposes for which they were used. During 50 years there had never been one recognised formula for making violet powder. He had known different formulæ made by different makers. He believed that sulphate of lime answered the purposes for which the powder was used even better than starch. He considered that the term "cosmetic" was more strictly applicable to violet powder than the term "drug."—Cross-examined: In a supplement to the "Pharmacopœia," of which he was the author, he could not point to any place where it was suggested that sulphate of lime would be suitable for violet powder. Replying to the Chairman, he said that since the agitation in reference to violet powder had arisen, he had analysed many samples of it. Eighty per cent. of the penny packet samples contained sulphate of lime. Some of the larger packets contained principally starch.

Dr. Samuel Crompton deposed that violet powder was a cosmetic, and not a drug.—In answer to the Chairman, he said that sulphate of lime was perfectly harmless, and might with impunity be applied to all the purposes for which violet powder made of the best wheaten starch was applied. His definition of the word drug was anything that entered into the composition of medicine.

Dr. Alexander Somers, Lecturer on Materia Medica at Owens College, gave similar testimony.

Several other witnesses having been called on behalf of the appellants,

Mr. Nash submitted that the conviction ought to be quashed.

Mr. Jordan argued to the contrary, saying that only since penny packets were manufactured for the use of the poor had violet powder in the shape of mineral substances been heard of.

The Chairman, in giving the decision of the Court, said that three questions had been raised. The first was, whether the article sold by the appellants was a drug within the meaning of Section 6; the second was whether, under the circumstances, it was sold to the prejudice of the purchaser; and the third was whether what was sold to the purchaser was not of the "nature, substance, and quality" of the article demanded by such purchaser. The Court was relieved from any attempt to solve the first two questions, because there was no necessity to go into them. They decided the case upon the third question. It appeared to them that it could not be said that the article which was purchased by Thomson was "not of the nature, substance, and quality of the article demanded." If there had been only one way of making this stuff, and that was making it from starch, then, clearly, there would not have been in this case a compliance with the demand; but there were many ways of making it. Every manufacturer,

and, it might be, every chemist and druggist, had his own formula for making this particular cosmetic, if they liked to call it so. There was no one recognised mode of making it, so it could not be said that all other modes were wrong. Under these circumstances they were not able to settle that the officer in this case got a substance which was not of the "nature, substance, and quality" of the article demanded by him. Consequently the conviction would be quashed.

Mr. Nash asked the Bench to consider the question of costs.

The Chairman replied that they could not give costs against the magistrates. They were bound to say that this inquiry on the part of the corporation was quite a justifiable and quite a right one. No doubt there had been a great noise made in London about these violet powders, which were supposed to contain poisonous substances. It was likely that, if the magistrates below had had the whole of the evidence which had been heard to-day before them, their decision would have been in another direction.

Mr. Nash: I will say nothing more about it.

The Court then adjourned.

THE MANUFACTURE OF SULPHURIC ACID.

It may be remembered that in 1877 Mr. Hugh Wallace, a chemical manufacturer, of Battersea, was prosecuted by the Wandsworth Board of Guardians for creating a nuisance by the manufacture of sulphate of ammonia. After a good deal of litigation the Court made an order that Wallace should pay the costs of the proceedings and should discontinue the nuisance. Shortly afterwards he commenced proceedings in liquidation in bankruptcy on a composition of 2s. in the pound. The premises were now in possession of a receiver, and the case came before the Court of Queen's Bench on October 14, when it was stated that the nuisance had been continued, and that no costs had been paid. Mr. Morgan Howard, for the Guardians, stated that they were as much as 2,000*l.* out of pocket. The Court, after a good deal of discussion, ordered that the costs should be paid at once, and that the defendants should not resume the manufacture of sulphuric acid or sulphate of ammonia. If they failed to pay costs within two months or recommenced the manufacture a fine of 3,000*l.* to be levied.

PHILLIPS v. THE LIEBIG EXTRACT OF MEAT COMPANY.

At the Common Pleas division of the High Court of Justice on December 2, Phillips, an iron moulder, sued the Liebig Extract of Meat Company to recover damages for wrongful dismissal.

The plaintiff was an iron moulder, living at Glasgow, and in 1873 he entered into an agreement with the defendants that he should go to Fray Bentos, Entre Rios, in Uruguay, and serve the defendants there for four years as a moulder, the salary to be 14*l.* a month, with a house and butcher's meat for the plaintiff and his family. Things went on without complaint until May, 1874, when Hunter, one of the workmen, was taken into custody, and put in the stocks, for having fired a gun on Sunday upon the highway. The plaintiff and the other Englishmen consulted, and determined to go to the magistrate and the commissary of police, and in other ways to see what could be done in Hunter's case. Hunter was in the end fined \$25, and the men having raised the money among themselves and paid it, Hunter was liberated. The workmen were away from their work in consequence of this transaction for two and a half hours, and notices to put an end to their engagements were given to the men, it being said that they had been absent from their employment without leave.

The plaintiff in his evidence, however, stated that they had leave from the chief engineer to go about Hunter's imprisonment. In the course of cross-examination it was stated that about 600 men were employed at the works in South America, and that a bullock was killed, boned, skinned, and put into the boiling pot in about three minutes.

It was stated on behalf of the defendants that the company had always been under a strong impression that the men were away without leave; but they had no witness to

contradict the plaintiff, and therefore they would not further defend the action.

A verdict was taken by consent for the plaintiff, damages 200*l*.

A verdict was also taken by consent for the plaintiff for 200*l*. in the case of *McQueen v. the Liebig Extract of Meat Company*.

BANKRUPTCIES AND LIQUIDATIONS.

G. J. ANDREWS, Chemist, 1 Little St. Andrew's Street, St. Giles's.

THE debtor has presented a petition for liquidation, returning his liabilities at about 700*l*., the following being a schedule of the principal creditors:—

	£	s.	d.
Whiting, Mrs., 121 Gower Street, W.C.	384	0	0
Truman, E., 19 Castle Street, Oxford Street	25	5	0
Sydney, F., Lord Mayor's Court, Guildhall	24	10	0
Haining, A., Trevor Square, Knightsbridge	22	8	0
Vincent, A., 45 Seymour Street, Portman Square	18	10	0
Receiver of Estate of Foulger & Son	18	8	0
Anderson, —, 447 Strand, W.C.	17	11	6
Cooper, H. C., Upper St. Martin's Lane	17	5	0
Bastable, 267 High Holborn	16	10	0
Dunn, Mrs., Cambridge Road, Kilburn	16	0	0
Piper, —, 39 Hoxton Square, E.	15	8	6
Davy, Yates & Co., druggists, Southwark	14	0	0
Snooke, G., Upper St. Martin's Lane	14	0	0
Tinsley, —, Chatham	13	15	2
Godwin, —, Fairmead Cottage, Peckham	13	4	0
Sproule, E. B., Drummond Crescent, Euston Square	13	0	0
Willis, R., St. Martin's Lane	11	4	0
Shearn, B., 41 Store Street, Bedford Square	10	12	0

W. BEATSON, Chemical Manufacturer, Rotherham.

THE case of the Yorkshire Banking Company *v.* Beatson & Mycock was again heard before the Common Pleas Division of the High Court of Justice on December 4 and 5. In January last the defendant Mycock became a dormant partner in the firm of William Beatson, chemical manufacturers. In August the firm stopped payment, with liabilities amounting to about 50,000*l*., when Mr. Mycock was appointed receiver. The immediate cause of the failure was the suspension of R. R. Kelly, of 59 Mark Lane. On August 31 Wm. Beatson was committed for trial on the charge of obtaining from Mycock the sum of 5,000*l*. by falsely representing himself to be worth 25,000*l*., when, in fact, he was insolvent. In the following month an action had to be undertaken in the Court of Chancery to compel the defendant Beatson to hand over to the receiver certain partnership-books. In November the Yorkshire Banking Company and the Leeds and County Bank commenced representative actions against Beatson and Mycock to determine their individual responsibility for certain bills of exchange endorsed to Wm. Beatson. Many other cases will be decided by these two. The defendant Beatson allowed judgment to go by default, and the action is in reality fought by Mycock to repudiate his liability on the bills in question. The action was tried before the Nisi Prius Court, when a special jury affirmed the liability of Mycock, on the ground that the only banking account kept by the firm was headed "William Beatson, Esq.," the name William Beatson being therefore taken to represent the firm, and not the individual. In the Court of Common Pleas a rule for a new trial was granted, chiefly on the grounds that one of the bills was endorsed to "Mr. William Beatson"—a fact which was not noticed till near the close of the previous trial. The case came again before the Court on December 4 and 5. It was argued at considerable length, but chiefly on technical grounds, and no new facts were elicited. The case was not concluded when the Court rose on the second day of hearing, and it was therefore adjourned till December 16.

JOHN COLBECK, Druggist, Kilnhurst.

ON December 3 a meeting of the creditors of John Colbeck, chemist and druggist, 2 Victoria Street, Kilnhurst, was held at the offices of Messrs. Oxley, Pashley & Coward, Rotherham. The statement of affairs presented showed that the total liabilities, which were entirely due to unsecured

creditors, were 347*l*. 11*s*.; and the total assets, 51*l*. 3*s*. 9*d*. These comprised book debts, 10*l*. 13*s*. 7*d*.; and 40*l*. 10*s*. in the hands of the sheriff's officer. The debtor obtained his discharge, and Mr. John Weir, accountant, was appointed trustee, with a committee of inspection, consisting of Messrs. J. C. Stephens (Rotherham), and Josh. Wood (Balby, Doncaster). Messrs. Oxley & Co. were appointed to register the resolutions.

Mr. Colbeck was fined at Rotherham on June 10 for selling deteriorated spirit of nitre. (CHEMIST AND DRUGGIST, p. 252.)

ALFRED COURT, Chemist, Druggist, and Drysalter, Birmingham.

A GENERAL meeting of creditors in the matter of a petition instituted by this debtor, residing at Birchfields, and carrying on business at 1 Hockley Hill, Birmingham, as a druggist and drysalter, was held at the Queen's Hotel on the 9th inst. Mr. Tildesley (Colthurst & Harding) was nominated chairman. Mr. Barker, from the office of Messrs. Hawkes & Weekes, represented the debtor. The following statement was submitted:—

Liabilities.

	£	s.	d.	£	s.	d.
Unsecured creditors	1,859	19	5			
Creditors for rents, rates, wages, &c.	95	10	11			
				1,859	19	5

Assets.

	£	s.	d.
Stock-in-trade in Hockley Hill	186	9	10
Book debts about 114 <i>l</i> . 18 <i>s</i> . 6 <i>d</i> ., estimated to produce	40	0	0
Cash in hand	8	0	0
Furniture, fixtures, and fittings at Hockley, 46 <i>l</i> . 2 <i>s</i> . 11 <i>d</i> ., and Birchfields, 175 <i>l</i> . 13 <i>s</i>	221	15	10
	456	5	8
Deduct creditors to be paid in full	95	10	11
	360	14	9

Mr. Garland, the receiver, read his report, which showed that the debtor commenced business in Bull Street, Birmingham, about ten years ago with a capital of 200*l*., which he borrowed from his father (a gentleman since deceased). In June, 1876, his lease having expired, his rent was raised from 130*l*. to 300*l*. per annum. He ultimately gave up the residential part of the property and took a small cottage outside of the town, and leased the shop and a small cellar only for 200*l*. This arrangement compelled him to alter the fittings of his shop in Bull Street. He opened his shop in Hockley Hill about three years ago. In September last he sold the chemist's business to a Mr. Frank, of Leicester, for which he received 342*l*.; aided by this sum, he paid off trade creditors to the amount of 424*l*. 14*s*. 10*d*., and thought, by giving his undivided attention to the Hockley shop, to be enabled to pull himself round. The debtor attributed his position to bad debts, depressed trade, and the long-continued illness of his wife who was still an invalid. Sympathy was freely expressed towards the debtor, it being considered a case of pure misfortune and an illustration of the result of endeavouring to pay the excessively high rentals of shops in Birmingham. The solicitor offered a composition of 2*s*. 6*d*. in the pound secured. Mr. Tildesley proposed that they should accept the sum of 3*s*. in the pound, payable in two instalments of three and six months, secured to the satisfaction of the chairman and Mr. Caldecott, which resolution was seconded by Mr. W. Lomas Harrison, and carried. The following are the creditors who proved their debts:—

	£	s.	d.
Colthurst & Harding, Bristol	115	0	7
Jones, W. & T., & Co., Southwark Street	29	15	10
Ellan, Jones & Co., Markeaton Mills	21	16	6
Lloyd's Banking Company, Birmingham	437	7	4
Samuel Thornley, Birmingham	7	0	4
Newberry & Sons	18	14	8
Gibbs, D. & W.	18	14	6
Edwards, W., & Sons	37	8	3
Mackay & Miller	47	11	9
Onkoy & Sons	27	17	3
Roth, J. S.	8	19	6
Leslie & Co. (Limited)	1	16	9
Parton & Osborn, Birmingham	1	10	10
Nash & Bibby, Birmingham	5	4	7
Wilkinson, Josiah, & Son	14	14	6

	£	s.	d.
The Borax Company (Limited)	2	5	0
Ganderton Bros. & Co., Hull	13	18	9
Gebhard, Rottman & Co.	10	3	0
Pligou, Wilkes & Lawrence	9	13	9
Rudge, Samuel Harrison	5	13	6
Patey & Co., London	5	10	0
Reeves, John, & Co.	13	6	0
Johnson & Co., Cross Street, Finsbury	14	8	0
Berger & Sons.	8	13	9
Ashby, Walter	6	13	5
Frinnby & Son	19	18	8
York Glass Company	15	5	6
Davy, Yates & Rontledge	21	17	9
Wyloes & Co., Coventry	31	7	2
Husbands, T.	5	10	0
Titterton & Smith, Birmingham	13	0	1
Southall Brothers & Barclay, Birmingham	14	7	9
Silverlock, Henry	6	4	3
M'Entie & Co., Birmingham	8	16	8
Court, J. F.	5	18	11
Curtis & Harvey	3	11	3
Ind, Coopo & Co., Burton	4	10	0
Blundell, Spence & Co., Hull	24	9	3
Whittaker & Grossmith	17	11	6
Barron, Frederick	34	18	7
Wallis, Joseph	24	1	11
Cruikshank, R.	13	10	10
Scotcher, C., & Son, Birmingham	38	16	6
Bell, R., & Co.	5	2	0
Smith, James, & Co., Birmingham	29	2	0
Marris, Charles, & Co., (Trustees of J. C. Mumford)..	9	1	6

WILLIAM PETERS OULTON, Chemist and Druggist, Tunstall.

A SECOND meeting of creditors in the matter of proceedings for liquidation, by arrangement or composition, instituted by this debtor, was held at the offices of Messrs. Llewellyn & Ackrill, solicitors, Tunstall, on November 8. The liabilities amounted to 1,438*l.* 6*s.* 9*d.*; assets, 312*l.* 16*s.* 10*d.*; amounts to be paid in full, 106*l.* 12*s.* 3*d.* The resolution of accepting a composition of 1*s.* in the pound was confirmed, and the dividend will be paid, it is stated, early this month.

ALFRED ALPHÆUS RAMSDEN, Oil Merchant, Dewsbury.

ON November 25 the first general meeting of creditors concerned in the affairs of Mr. Alfred Alphæus Ramsden, oil merchant, of Dewsbury, was held at the Station Hotel, Batley. Mr. W. Wood presided. Mr. D. A. Shaw, solicitor, Dewsbury, read the statement of affairs, which showed the liabilities to be 2,437*l.*, and the assets 665*l.* The debtor did not offer any composition, and liquidation was accordingly resolved upon. The chairman and Messrs. John Rycroft and John Hyland were appointed the committee of inspection. Mr. D. A. Shaw was entrusted with the registration of the resolutions. The trustee in the matter is Mr. Whiteley, of Messrs. Good & Whiteley, accountants.

ARTIFICIAL CHAMPAGNE.

THE *Chemiker Zeitung* gives the following directions for the manufacture of artificial champagne. Have a cask of 100 litres capacity, put in it 20 litres of thick syrup (made from 20 kilos. of sugar, and water to make 120 litres). Add 10 kilos. of raisins freed from their stones, washed and minced. Fill the cask to within 10 centimetres with good white French or Mosel wine. Close the bung-hole, and after rolling the cask about a little so as to mix the syrup with the wine, bring it into a moderately warm place to induce fermentation. When this has commenced reduce the temperature to about 63° F. When the cask has been set at rest a hole is bored through the bung and a syphon-shaped glass tube inserted, leaving the cork quite air tight, and bringing the outer limb of the tube into a glass vessel of water in order to watch the development of the carbonic acid. When this has ceased the bung should be made quite air tight and the cask allowed to lie in a cool cellar for three months. At the end of that time the wine is drawn off carefully into a clean cask, and to the bung-hole of this a carbonic acid gas apparatus is applied, taking care that the cask is perfectly air-tight. As much gas is forced into the wine as it will take, and then the artificial champagne is bottled off. A little cognac and syrup is put into the bottles before adding the wine.

The carbonic gas apparatus consists of two glass vessels connected. The lower one has a metal bottom, and a small

opening at the top for acid and marble. Two tubes pass from this vessel to the upper one conveying the gas. These tubes are bent at the top and the gas is conducted into water and then washed. As it escapes from the water it is forced by the pressure of the air through a tube which passes through both vessels, and also through the bung-hole of the cask. [It seems to us that an aerated-water apparatus would answer the purpose much better].

Pharmaceutical Chemistry.

AN IMPROVED FORMULA FOR LIQUID EXTRACT OF YELLOW CINCHONA.

By Michael Conroy, F.C.S.*

FEW of our official formulæ have received more adverse criticism than the liquid extract of yellow cinchona, and few indeed have so well deserved it. I am only adding to the testimony given by many able chemists and pharmacists when I say that our present official preparation does not represent the bark from which it is obtained, either in alkaloidal or other properties, and my personal experience is that from 60 to 75 per cent. of the alkaloids are left unextracted in most barks. It is also well known that the quantity of fluid extract which different barks yield varies considerably, and that the finest barks often give the worst yield, as the following results will show. The barks employed in these operations were fine Calisaya, each sample containing over 2 per cent. of quinine. The quantities operated upon varied from 1 to 3 cwts., but, for the sake of distinctness, I will reduce these quantities to 100 ozs. each, and give proportionate yield of finished fluid extract.

No. 1.—100 ozs. produced 16·4 fluid ozs.

No. 2.—" " 18·5 "

No. 3.—" " 17·3 "

No. 4.—" " 18·2 "

No. 5.—" " 17·9 "

No. 6.—" " 19·8 "

I could give many more instances, but these will suffice to show the variability of the yield from official bark; and although the above are exceptional cases, I can say that it is a rare occurrence to meet with a Calisaya bark one pound of which will yield four fluid ounces of fluid extract. Another great disadvantage in this preparation is the variable nature of the resulting fluid extract, some samples being much more soluble in water than others, and it is nothing uncommon to find that two fluid extracts will not mix without producing turbidity. The amount of evaporation required to produce this unnecessarily concentrated preparation is another very great fault, for, owing to this, the small amount of quino-tannic acid which the water extracts is almost entirely oxidised into cinchona red. My object, however, is not to discuss the demerits of our present preparation, but to lay before you the results of some experiments which I have made with a view to arrive at a suitable menstruum. To arrive at this desideratum it is necessary to consider the nature of the active properties which we desire to extract, and then find out the most suitable solvent. The organic constituents of true cinchona bark are the alkaloids, viz., quinine, cinchonine, and two or three isomeric modifications of these bases; aricine; quinic, quinovic, and quino-tannic acids; quinovin or quinoval bitter; cinchona red; a small quantity of essential oil; a yellow colouring matter; a green fatty matter; together with starch, gum, and woody fibre. The essential or specific therapeutic properties reside in the alkaloids, but these properties, according to the best authorities, are considerably aided by the natural acids of the bark, and more especially by the quino-tannic acid, hence the different physiological action mentioned by eminent medical authorities observed between the administration of the powdered bark and its alkaloids, whether mixed or separate.

In a paper read before the British Pharmaceutical Conference held in London in 1874, Dr. de Vrij, the author, says that besides the powder he only knows of one pharmaceutical preparation which equally contains the chief therapeutic agents, and that preparation is the alcoholic extract, while Mr. Umney, in the discussion which followed the

* Paper read at the evening meeting of the Liverpool Chemists' Association, December 5, 1878.

reading of the above-mentioned paper, said that he considered proof spirit to be a suitable menstruum. More recently M. Ekin, in his very valuable paper showing the comparative strengths of the different official preparations of yellow cinchona which he read this year at the meeting of the British Pharmaceutical Conference in Dublin, clearly shows that proof spirit thoroughly extracts the alkaloidal properties of the bark.

The Pharmacopœia of the United States directs this preparation to be made with two menstua, the first being a spirit a little stronger than our proof spirit but combined with glycerine, and composed of alcohol (sp. gr. .835) 8 parts, water 5 parts, and glycerine 3 parts. With part of this menstruum the cinchona in fine powder is moistened, and then packed in a percolator, the remaining portion being poured upon it, and macerated in a warm place for four days; percolation is then ordered with diluted alcohol (sp. gr. .941) until 24 fluid ozs. have been obtained, of which the first 14 are reserved, and the remainder carefully evaporated to 2 fluid ozs. and added to the reserved 14. This formula is a decided improvement on our own, but still it is not one that we could unreservedly accept for the following reasons:—Firstly, glycerine, as a menstruum, is not looked upon favourably in this country either by the medical profession or by pharmacists, neither parties seeing any actual advantage in its use; while it has been asserted that it interferes with the activity of some medicines, especially those possessing astringent properties. However this may be, its use in this preparation is certainly unnecessary. Secondly, it is practically impossible to exhaust the bark with the quantity of menstrua necessary to produce 24 fluid ozs., as directed in the formula. Thirdly, the alcoholic strength of the United States diluted alcohol is not suitable for the thorough extraction of the quinotannic acid of the bark, as will be seen below. This fault, however, is considerably mitigated by the previous maceration in a somewhat stronger spirit.

That an alcoholic menstruum is the most suitable for this preparation was very forcibly impressed upon me some three years ago by the results of several analyses which I then made of "exhausted" bark, representing the marcs from the preparation of alcoholic extract, proof tincture and aqueous liquid extract, when I found that while the samples representing the marcs of the alcoholic extract and proof tincture were devoid or almost devoid of alkaloids, the latter contained them in abundance. The next point to decide is in regard to the most suitable strength for an alcoholic menstruum, and with this object in view I tried the following six experiments. The bark used was fine Calisaya, and in each case 100 grs. in very fine powder (No. 100) was percolated with the different menstua until nothing more could be extracted, the amount of percolate obtained from each being 1,000 grain-measures.

No. 1,	percolated with rectified spirit,	sp. gr. .838.
No. 2,	" " 30 o.p.	" " .880.
No. 3,	" " 10 o.p.	" " .908.
No. 4,	" " proof	" " .920.
No. 5,	" " 10 u.p.	" " .931.
No. 6,	" " 20 u.p.	" " .941.

The marcs from these were afterwards treated with other menstua, as under No. 1, with distilled water, to which it yielded a very small amount of gummy matter, consisting partly of quinovic acid. Nos. 2, 3, and 4 yielded nothing whatever to either rectified spirit or water, and although these marcs were minutely examined for alkaloids and natural acids, only the faintest trace of quinotannic acid could be found.

Nos. 5 and 6 were further treated with rectified spirit, to which they yielded both alkaloids and quinotannic acid, the latter in abundance, thus proving that they were unsuitable menstua. The foregoing experiments prove that alcoholic menstua, ranging in strength from proof to 30 over proof, completely exhaust yellow cinchona of the whole of its therapeutically active properties, but the best of the three is that of proof strength, as it more readily exhausts the bark, less being required for the purpose. The following is the formula which I would recommend, and as I have worked it on both a large and a small scale, I know from experience that it will give a thoroughly satisfactory result, the

strength being, 1 fluid ounce equal to 1 ounce of the bark:—

Yellow cinchona, in fine powder (No. 80)	20 ozs.
Proof spirit	q. s.

Moisten the powder with 10 fluid ozs. of the spirit and pack gently in a percolator; pour on to this another 10 fluid ozs. of the spirit, so as to thoroughly saturate the powder. Allow this to macerate for a couple of days and then start the percolation, occasionally adding fresh menstruum until 16 fluid ozs. have been collected. Reserve this portion and continue the percolation until two more pints of percolate have been obtained. Evaporate this at a temperature not exceeding 180° Fahr. to the consistence of a soft extract, which redissolve in sufficient proof spirit to make up four fluid ozs., add it to the reserve portion, and filter if necessary. The two pints of percolate are ordered to be reduced to an extract on account of the greater volatility of the alcohol of the menstruum, which, in passing off before the watery portion, leaves a rather unsightly watery mixture behind, which, if reduced to four fluid ozs., and added to the reserved portion, would so reduce its alcoholic strength as to cause a deposit of some of its active properties. The evaporation necessary in this process is certainly a disadvantage, but if carefully and expeditiously conducted at the above-named temperature this defect may be reduced to a minimum. After collecting the first 16 fluid ozs. it is a good plan to work the remainder of the menstruum in three or four separate portions, passing each twice through the percolator, by which means less menstruum may be made to answer.

The spirit can be recovered from the two pints of percolate, and also from the marc, by distillation.

SOME ADULTERATIONS OF ESSENTIAL OILS.

LEONHARDI, in the *Archiv der Pharmacie*, describes some new sophistications of essential oils. The stearoptene of fennel oil, he states, is imported from Russia for adulterating oil of anise, to the extent, sometimes, of as much as 90 per cent. The fraud is detected by heating the oil, when the characteristic odour of the fennel becomes apparent. Oil of coriander and oil of bergamot are adulterated with rectified oil of orange; the admixture may be discovered by the relatively sparing solubility of oil of orange in 90 per cent. alcohol. He has found also oil of caraway adulterated with oil of turpentine; the fraudulent oil forms a turbid mixture with 90 per cent. alcohol. As the best test for the presence of alcohol he recommends the addition of a crystal of aniline red.—*Am. Drug Circular*.

NICKEL.

MESSRS. J. P. LAROCHE and J. P. PRAT, of Bordeaux, have secured a patent in Germany for obtaining nickel from nickel ores by precipitating the nickel from sulphuric solution by means of oxalic acid, and converting the oxalate of nickel into carbonate by solutions of carbonated alkalies.

As a delicate test for the presence of nickel, Boettger recommends the xanthogenate of potassa. The addition of a small quantity of this reagent to a solution containing nickel salts produces an intense yellow coloration. The addition of a large quantity causes a yellow precipitate. The same reaction—coloration, and on addition of more of the reagent, a yellow precipitate—is yielded by salts of copper; but the colour disappears at once on the addition of a few drops of ammonia, while in the case of nickel ammonia does not affect it.

IRON PROTECTED FROM CORROSION.

MR. J. B. A. DODE has invented a method of protecting iron from corrosion, which is both effectual and ornamental. Its cost is about one-third of that of a coat of paint, one-tenth of that of electroplating with nickel, and one-twentieth of the ordinary process of painting and gilding. It can be coloured in a variety of ways.

Iron treated by this process is called "platinised." The articles to be protected are coated with a thin film of borate of lead, containing a little cuprous oxide in solution and bright scales of precipitated platinum in suspension. They are then heated to redness and become covered with a thin, glassy, bright grey coat, similar in appearance to

polished iron. It is unaffected by sewer gas, dilute acids, and alkalis, and the heat of a kitchen fire. The process has already made considerable progress in France, and has been patented in this country.

CATERPILLARS AND GUT.

SILKWORKS up to the present have been the only larvae from which "gut" has been prepared. This material has valuable properties—strength, fineness, and colour; and if it could be produced in long pieces and at a low cost it could be used for many purposes. It is now proposed (in *The Colonies and India*) to use the caterpillars which destroy food plants for this purpose. If practicable, the project is good and useful, and the idea will probably become valuable.

NEW AND STALE BREAD.

M. BOUSSINGAULT has investigated the nature of the change which occurs in bread when it becomes stale. Up to the present this has been very little understood.

A circular loaf, 12 inches in diameter, and 6 inches thick, was taken from an oven heated to 240° Réaumur, and a thermometer was immediately forced 3 inches into it. The thermometer indicated 78° R. (207°·5 F.). The loaf was then taken to a room at the temperature of the air (15° R.), and was found to weigh 7½ lbs. In twelve hours the temperature of the loaf sank to 19°, in 24 hours to 15°, and in 36 hours to 14°. In the first 48 hours it lost only 2 oz. in weight. After 6 days the loaf was again put into the oven, and when the thermometer indicated that its temperature had risen to 55° R., it was cut, and was found to be as fresh and to possess the same qualities as if it had been taken out of the oven for the first time; but it had now lost 12 oz. in weight. Experiments were also made on slices of the loaf with similar results, proving that new bread differs from old, not by containing a larger proportion of water, but by a peculiar molecular condition. This commences and continues to change during cooling, but by again heating the bread to a certain temperature it is restored to its original state.

It is this mechanical state which makes new bread less digestible than old. The former is so soft, elastic, and glutinous in all its parts that ordinary mastication fails to reduce it to a sufficiently divided condition. It forms itself into hard balls which are almost unaffected by the gastric juice. These balls often remain in the stomach, and like foreign bodies, irritate and discommode it, inducing all sorts of unpleasant feelings.

CREASOTED WOOD.

MR. E. R. ANDREWS, of the United States, has made an interesting experiment with creasoted wood. A pine slab was taken, half of it was thoroughly impregnated with creasote, the other half being left untreated. It was then exposed during the season 1877, in the waters of the Gulf of Mexico. When it was removed it was found that the creasoted portion was clearly and sharply defined by its darker colour, and that it was perfectly sound, while the untreated half was riddled by teredos, which had perforated it quite close to the edge of the creasote. The experiment proves that this substance is a perfect protection against the attacks of ship-worms. It is also insoluble in water, and is not gradually washed out like most mineral compounds.

THE CHEMICAL SOCIETY,

November 21.

MR. R. WARRINGTON in the chair.

The following papers were read:—

"A Chemical Study of Vegetable Albinism," by Professor Church. The author has made numerous analyses of white and green leaves, of the same age, from the same plant, in order to discover whether any difference in their composition could be detected. The leaves were gathered from the maple, the holly, the ivy, and three exotic plants. White leaves contain more water than corresponding green leaves, while the ash of white leaves contains more potash and phosphoric acid, but less lime, and especially less oxalate and carbonate of calcium. Nearly 60 per cent. of the nitrogen in the white leaves is

non-albumenoid, while the green leaves contain 30 per cent. of nitrogen in that state. The author has also analysed a vegetable parasite, the dodder, and its host, the red clover. He finds that the white leaves resemble in composition the parasite, while the host represents the green leaves. The white leaf is therefore, in a sense, a parasite on the green leaf, and owes its existence to its connection with the normal portion of the plant.

"Relation between the Melting-points of the Elements and their Co-efficients of Expansion," by Dr. Carnelly. The author finds that of 31 elements 26 show that the co-efficient of expansion increases as the melting-point diminishes. The five exceptions are arsenic, antimony, bismuth, tellurium, and tin.

"A Preliminary Notice on a Hydride of Boron," by Mr. A. H. Jones. The author succeeded in preparing a grey friable mass of magnesium boride by strongly heating a mixture of magnesium dust and boron trioxide. On treating this mass with hydrochloric acid a colourless gas was evolved, spontaneously inflammable, burning with a green flame, and of disagreeable odour.

Tuesday, November 12.

THIS was a special meeting to hear the Faraday lecture, which was delivered in the theatre of the Royal Institution by Professor A. Wurtz, and was entitled, "La Constitution de la Matière a l'État Gazeux." The lecturer commenced by expressing his sense of the great honour which had been conferred on him by inviting him to speak in a theatre sacred to the name of Faraday. The subject was one of great interest to physicists and chemists. For some time gases and vapours were separated from each other by the distinction that vapours could be condensed to fluids, whilst gases were not so condensable. This distinction has gradually been broken down, and the existence of a body in the state of gas or liquid has been reduced to a simple question of temperature and pressure. Young Faraday, while assistant at the Royal Institution, liquefied chlorine. Soon afterwards he obtained sulphurous acid, ammonia, cyanogen, and many other gases in the liquid state. In all his experiments the principal agent employed was pressure; some gases resisted all attempts to liquefy them by pressure alone, and were called permanent gases. From Andrews' remarks it became evident that for each liquid there is a temperature, the "critical point" above which it is impossible for the liquid to exist as such. However enormous the pressure may be, it must assume the gaseous condition. The dynamical theory was then touched upon, as regards its explanations of the above facts. Intense cold was finally tried in conjunction with enormous pressure, and by these means MM. Cailletet and Raoul Pictet have succeeded in liquefying almost simultaneously all gases hitherto called permanent. A lucid description of the apparatus used by these investigators was given. Thus the distinction between permanent and non-permanent gases has been abolished, and there are no longer any permanent gases. Molecules and molecular force were then considered by the lecturer, especially Avogadro's law, "Equal volumes of gases and vapours enclose the same number of molecules." Next was illustrated and developed in an exceedingly eloquent manner the proposition, "If one atom of hydrogen occupies one volume, the molecules of all compound bodies in the gaseous state occupy two volumes." The apparent exceptions to this latter proposition were dwelt upon and pronounced to be due to a decomposition of the substances which form the exceptions. With an experiment which demonstrated this to be the case with ethyl hydrate, the lecturer concluded. The lecture was throughout remarkable for the elegant experiments with which it was illustrated. At the conclusion of the lecture Professor Wurtz was presented with the Faraday medal struck in palladium.

December 5.

DR. GLADSTONE, President, in the chair.

Professor Tidy read a lengthy and important paper on "The Processes for determining the Organic Purity of Potable Waters." The conclusions at which the author arrives, after many experiments and a careful examination of the comparative analyses of over 1,600 waters, may be briefly summed up as follows: *The Ammonia Process* fur-

nishes results which are marked by singular inconstancy, and are not delicate enough to allow the recognition and classification of the finer grades of purity or impurity. The errors incidental to the process form an array of difficulties which become infinitely serious, seeing that the range (as regards albuminoid ammonia) between pure and dirty waters is comparatively small. *The Combustion Process* has all the evils of evaporation to encounter, but the organic carbon estimation is trustworthy; the organic nitrogen determination, however, scarcely yields absolutely trustworthy evidence on which to found an opinion as to the probable source of the organic matter. The process, nevertheless, is of great value. *The Oxygen (Permanganate) Process* avoids the errors incidental to evaporation; its results (when properly used) are constant and extremely delicate; it draws a sharp line between the putrescent, or probably pernicious, and the non-putrescent, or probably harmless organic matter; by it a bad water can never be passed as good. As far as the three processes are concerned, the oxygen and combustion processes give closely concordant results, whilst those yielded by the ammonia process are often at direct variance with both. The discussion on this valuable paper was postponed until after it had been printed, when a special meeting will be called for the purpose.



AN ENTERPRISING DRUGGIST advertises his cough medicine in the following manner:—"Cough while you can, for after you have taken one bottle of my mixture you can't."

CASTOR OIL mixed with an equal weight of tallow or other oil is an excellent dressing for leather. Besides this, neither rats, cockroaches, or other vermin, will attack leather so prepared.

QUININE IN RUSSIA.—The Russian military hospitals consumed during the year 1877 6,000 kilogrammes of sulphate, and 3,000 kilogrammes of hydrochlorate, of quinine. It is stated that the consumption of 1878 will exceed those quantities.

THE GLASS TRADE.—The strike at Messrs. Ryland & Codd's glass works has ceased after lasting about a month. The men have come in at reduced wages. Several weeks, however, must elapse before all the workmen can be provided with employment.

CO-OPERATIVE CLERGY.—A writer in the *Echo*, referring to the new Clergy Co-operative Stores, wonders if Christianity would have made the wonderful progress it achieved in the first century if St. Paul had set up a big shop in Corinth, to undersell the retail traders of that city, with Titus, Mark, Timothy, and Barnabas as directors.

HARNESS SOAP.—Take resin soap, 2 lbs.; sperm oil, $\frac{3}{4}$ lb. Digest the soap with a quantity of boiling water just sufficient to thoroughly soften it, when it may be triturated with the warm oil and a sufficient quantity of fine boneblack until a uniform paste is obtained. Ordinary unmixed soap turns brown many of the black pigments in use. The addition of oil is a great improvement.

PEACH KERNELS FOR CLEARING WATER.—A Dutch hotel-keeper in the Transvaal clarifies the turbid water of the district in the following way. Half-a-dozen dried peach kernels are slightly cracked and thrown into a large butt of water. In an hour or two the muddiest water will be found beautifully clear.—*Mrs. Carey Hobson in "The Colonies and India."*

A MARTYR to DUTY.—[The Lord Chief Justice holds that "there can be no conviction for adulteration of whisky where the inspector does not drink any, and so is not prejudiced."] Inspector (to analyst): "Tosticated? Not 't all! M-my duty to be pre-prejudiced. Am pre-pre-prejudiced. That's all.—*Funny Folks.*"

TRANSPARENT SHOW BILLS may be cemented to glass windows as follows:—Very fine white glue (or preferably clean parchment chippings boiled in distilled water in glass or enamel until dissolved) must be applied very evenly with a soft hair brush to the face of the bill. Then press it on the glass, and in a few minutes the bill will be firmly fixed. Glass may be fixed to glass in this way, and the cement will bear a good deal of dry heat.—"Tried and, proved. 'Mallet,'" in the *English Mechanic*.

THE FOLLOWING is the way an Italian medical journal, the *Annali Universali di Medicina e Chirurgia*, addresses its defaulting subscribers:—"Si pregano i signori associati in mora di pagamento a voler mettersi sollecitamente in regola onde evitare reciproci disturbi ed eccitamenti personali." That is to say:—"Subscribers in arrear of payment are begged to be good enough to put themselves right at once, in order to avoid mutual disturbance and personal excitement."

AWE-FULLY JOLLY.—The principal witness for the Society of Apothecaries was Mr. Thomas Jolly Death—

Death to the dying may look grim,
E'en to the boldest melancholy,
But when the craft subpoena him
We find for once that Death is jolly.—*Punch.*

TO DESTROY MOTHS.—The *American Agriculturist* states that benzine will utterly destroy moths, eggs, and larvae. If furniture, furs, flannels, wool, &c., containing moths, be thoroughly saturated with benzine once, this will be sufficient, and the odour of the benzine will pass off in a few days.

CHIPS FROM PUNCH'S ALMANAC.—What wonder if excellent whisky is made from potatoes! It is the *spiritus potatorum*.—In search of a Scientific Frontier: Going to the dentist to buy a set of teeth.—Between the Metals: Silver, the more chaste. Gold, the more run after.—*Resurgam*, as the Onion Sauce observed to the Rabbit.—For Intelligent Inquirers. Explanations of the letters often appended to names, illustrious and otherwise: M.P., Master of Palaver; F.R.S., Feeder on Roast Sirloin; M.D., Maker of Doses; F.S.A., Fellow Slightly Amusing; A.S.S., needs no explanation.—Motto for the Champions of the Electric Light: *Divide et Impera!*

COMPOSITION FOR REMOVING PAINT.—Mr. H. P. Heyhoe, of Stowmarket, has recently patented a preparation which will soften paint, varnish, or japan, so that they can be easily removed from old surfaces, and which can also be used for removing oxide or dirt from the surface of metals, and, when diluted, for cleaning paint, &c. It is a solution of caustic soda, about twice the strength of that in the Pharmacopœia made from quicklime and common carbonate of soda, and containing, in about 140 gallons, 30 lbs. to 35 lbs. of treacle and 10 stones of flour. A gallon of carbolic acid has to be added to this quantity to prevent decomposition. It is difficult to see the advantages this mixture has over a solution of caustic soda of the same strength.

AMERICAN RIVALRY.—An American commercial journal quotes from a consular report particulars which go to show the commercial strength of England in Peru. The report declares that "England buys from Peru almost the entire exports of guano, nitrates of potash and soda, wool, cotton, bark, sugar, and, indeed, everything that Peru has for sale, and sells to Peru everything which she can manufacture, invent, or counterfeit." The *American Reporter* acknowledges that England has possession of the world's markets, and believes it will take good fighting to dislodge her, "but we can eventually accomplish it." State subsidies are appealed for to provide low rates of freights and drawbacks of duties—an invincible proof that the American mind is not yet big enough for a world-wide commerce. "But the great efforts that American manufacturers are making in every branch of trade by advertisement and by push to secure England's markets for themselves must not be despised. The advantages offered by such class journals as THE CHEMIST AND DRUGGIST for advertising to the remotest foreign buyers are likely to become more and more appreciated as international competition becomes keener, and will become more and more productive as colonies and foreign settlements become extended."



For particulars of Advertisements, Subscriptions, &c., please refer to the first page of Literary matter. An Index to the Advertisements contained in this issue will be found in the front portion of the Journal.

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CONCENTRATED COCOA,

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HAWKER'S JUJUBES. See page 111,

All Chemists are invited to apply for a Copy of our

Wholesale Price List of HOMŒOPATHIC MEDICINES,

Mother Tinctures, Pilules, Globules, Sugar of Milk, Medicine Chests and Cases, Glass and Cardboard Goods, and all Sundries connected with the Homœopathic Business.

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SEE SEABURY & JOHNSON'S Advertisement of INDIA RUBBER POROUS AND SPREAD PLASTERS on page 101.

THE ANALYSED TEA.

Sold by Chemists throughout the Kingdom.

FOR TERMS, ETC., APPLY TO

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Wholesale Agents to the Analysed Tea Association,

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A Vacancy for an Articled Pupil.

EVANS, LESCHER & EVANS,

WHOLESALE & EXPORT DRUGGISTS,

Beg to announce that owing to the RE-BUILDING OF THEIR PREMISES at BARTHOLOMEW CLOSE, E.C., they have REMOVED to Temporary Warehouses at

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PURE COD LIVER OIL. See page 90.

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E. GOULD & SON,

Chemists by Appointment to the London Homœopathic Hospital,
Manufacturing Homœopathic Chemists,

Are desirous of appointing Agents for the Sale of their Preparations in various parts of the United Kingdom and the Colonies.

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Prize Medals:
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In consequence of the trouble caused by the return of empties we have included them in price.

Per cwt., Bag included; or 21/ in one-cwt. Casks. Empties not returnable. 2s. per cwt. extra for smaller quantities.

BEST QUALITY. NO OIL EXTRACTED.

Carefully cleaned and ground so as to retain the natural colour of the seed without being heated.

Special quotations for Larger Quantities, Samples, Reports, and Analyses, on application, post free.

Newcastle Granary and Steam Mills, Farringdon Road,
LONDON, E.C.

UNGUENTUM PETROLEI. See page 93.

ELLIMAN'S EMBROCATION. See page 67.

EDITORIAL NOTES.

COUNTER PRACTICE.

AN esteemed correspondent suggests to us that a short article showing without prejudice or passion "the legal position of counter-practice as of late set forth" would be useful to many pharmacists at the present time. He says "the subject is obscured to many of us in the articles already published by speculations on the chances of an appeal, abuse of the apothecaries, and the claims of our own position."

The only difficulty about the task is the somewhat paradoxical one that it is too easy. No article can be made of

"The legal position of counter practice as of late set forth" has to be summarised in these few words—Counter practice has no legal position whatever.

This is the view first taken by Baron Bramwell, secondly the judge of the Nottingham County Court, and most recently by Baron Pollock. All those authorities agree in holding that Section 28, which we supposed protected the business of chemists and druggists to the extent to which it is carried before 1815, protects it only in respect of buying, compounding, preparing, dispensing, and vending drugs. Anyone—not chemists and druggists only—anyone going beyond these limits, and advising or prescribing for a human disease, never mind for how simple a complaint, never mind whether with a view to profit or not (this is according to Baron Pollock's interpretation), is thereby acting and practising as an apothecary, and is liable to 20*l.* penalty if the Apothecaries' Society please to prosecute.

Baron Cleasby seemed to hold a different opinion, but he gave no judgment. Mr. Justice Field (in the Wiggins trial) gave so much weight to the evidence of chemists who had been in the business before 1815, that he submitted the question to the jury whether Wiggins had or had not exceeded the limits defined by their testimony. But he expressly reserved as a legal point the question whether Section 28 permitted prescribing in any degree.

The verdict in the recent Shepperley trial in favour of the defendant was the expression of the jury's opinion concerning the facts of the case submitted to them. It did not and could not affect the interpretation of the law as laid down by the eminent judge who directed them.

THE FORTHCOMING SPECIAL MEETING OF THE PHARMACEUTICAL SOCIETY.

The members of the Pharmaceutical Society will shortly be called on to say whether or not the existing Council truly represents their opinions in respect to the protection of their interests. According to the bye-laws the Council is empowered to call a special meeting of its members on the nomination of 30 members. Such a demand has lately been presented, and the meeting is fixed for the 9th of next month.

It is of course very undesirable that such an appeal should be made without the most urgent necessity. The bye-law provisions provide a means of entirely changing the character of the Council once a year, and under ordinary circumstances should suffice to keep the representatives fairly in accordance with the constituency. The attempt, however, to decide a political question by means of the election of Council has hitherto proved a failure. Those holding views opposed to the sitting Council have not only to battle with their active antagonists, but the *beati possidentes* have in their favour all the deadweight of indifference and natural Toryism which is so important a factor in pharmaceutical affairs. This explains how it happens that a general meeting will often meet to a fierce opposition to the Council while the voting members a day or two after will scarcely indicate even by a ripple the effects of the storm. It is time, therefore, that once the real combatants in the camp should meet on a distinct issue, and it is much to be desired that this should not be blocked out by any legal log, nor confused by irrelevant or incorrect arguments on either side.

The real reason for calling this special meeting lies in the fact that the decision of the Society to be of any value must

be given at once. Next May the Shepperley case, as far as the Law Courts are concerned, will probably be at an end, and the question to be decided is, as a neutral councillor himself expressed it, whether the Pharmaceutical Society shall cast in its lot with the Apothecaries' Society or with the trade. Not to be with us in this matter is assuredly to be against us.

The claim put forward by Mr. Hampson at the last general meeting of the Pharmaceutical Council for "adequate" assistance to the Trade Association in the present contest with the Apothecaries' Society was so forcibly argued, especially by himself and Mr. Shaw, that the opponents of the grant scarcely ventured to face the question at all. What could be more flimsy than the complaint of the President, that the Council would have no control over money granted to the Association? or of Mr. Bottle, who insinuated that the money so granted might be used for the purpose of turning him and his party out of the Council? The money is asked for for a specific purpose, and there are plenty of ways whereby it can be confined to that purpose or even controlled by the donors. Mr. Schacht, who has spent half his public life in inculcating the duty of mutual support in the way of education, has only a gentle sneer for the notion of mutual support when trade interests are threatened. Mr. Frazer killed the Trade Association long ago, and he cannot understand why it don't die, as any well-behaved association would. Mr. Sandford was the only member of Council who really argued against the motion, and the case must have been very desperate indeed if he could not have found something plausible to say. There was some truth in Mr. Hampson's sarcasm that Mr. Sandford would not defend even the Angel Gabriel if in the person of a poor chemist. Lightly passing over the obligation imposed upon the Pharmaceutical Society by its charter, and as trustee of the "Druggists' Old Fund," to defend and protect the interests of the trade, Mr. Sandford runs into a strain of comforting argument, urging that there is really no danger, because, in his opinion, the Apothecaries' Society will not prosecute except in very rare and serious cases. What is the use of this kind of assurance when the fact stares us in the face that the Apothecaries' Society through their legal representatives are struggling with all their might to establish the right to prevent any one but their own associates from treating even sore throats or pimples on the face? The counsel for the apothecaries have more than once declared that this is a test case, and we cannot understand why their word in this matter should not be taken.

The Pharmaceutical Society was chartered and endowed for the express purpose (as one of its objects) of protecting the interests of its members. These are unquestionably attacked by the Apothecaries' Society, and though it is true, as Mr. Sandford says, that victory in this case will not ensure those interests, it is of all things most desirable to show that the trade of the country is practically unanimous in its determination to resist these unreasonable medical claims to the uttermost. The outside public has come to a very distinct conclusion in our favour, and it must seem strange indeed that an influential section of the trade should stand apart in haughty contempt while the struggle is proceeding. We have ourselves little doubt that ultimately Parliament must be appealed to. The best preface to such a step is to have the law clearly defined by the greatest authorities. This is now being accomplished. Whether the law be for us or against us, it is as well to know clearly what it is, and to let the public know also. The Trade Association has succeeded in drawing forth unanimous expressions of public indignation against the selfish demands made by the Apothecaries' Society. What is wanted is to

substitute a "scientific frontier" between our trade and that of the apothecaries for the present hap-hazard one, and we are in a fair way to accomplish this purpose if the whole trade will unite its energies and resources.

STAMPED LOZENGES.

A CORRESPONDENT of a contemporary has frightened a good many chemists by the announcement that "the Inland Revenue officers are actively enforcing the law against vendors of lozenges bearing the name of the vendor stamped on the lozenge." We have ascertained that there is no sufficient foundation for this statement. Proceedings may have been taken, perhaps, in some solitary cases in respect to the sale of medicated lozenges, but the Board of Inland Revenue has certainly not authorised any new departure.

Lozenges are not liable to the medicine stamp duty unless they are recommended for the prevention, cure, or relief of any disease or ailment, or unless a proprietary interest is claimed in them. Strictly speaking, it is at least possible that "cough lozenges" might come under the first of these conditions. But the Board of Inland Revenue has always interpreted the Act liberally in reference to such articles as these, and has not interfered with the sale. But cough lozenges sold as "Smith's cough lozenges" would probably be considered liable, because that title claims a proprietary right in them for Smith. Cough lozenges sold as such, but stamped "Smith" on the lozenge, might be forced into the category of proprietary lozenges, but we do not think it likely that any such attempt will be made by the Board.

THE PUBLIC AND COUNTER PRACTICE.

THE effect of the recent trial at the Exchequer Court has been to bring the conduct of the prosecutors very prominently before the public, and the opinions that have been expressed by all the journals, except those devoted expressly to the medical profession, have been, so far as we know, invariably and almost without qualification in favour of the trade. We quoted last month articles from the *Standard*, *Telegraph*, and several of the leading provincial papers. Other articles have come before us since. Let us take briefly the conclusions arrived at. The *Telegraph* sincerely hopes the chemists will be successful; the *Standard* is not inclined to look with favour on prosecutions the chief object of which appears to be to put fees into the pockets of doctors; the *Morning Advertiser* declares that the right claimed by the Apothecaries would be a tax on the rich and plain cruelty for the poor; the *Weekly Dispatch* says it would be a real iniquity if, by any technical pleading, chemists were barred from exercising those little kindnesses which so often prevent a serious illness, and which bring profit to them without robbing any one else of a farthing. The *Birmingham Post*, the *Leeds Mercury*, the *Manchester Guardian*, the *Sheffield Telegraph*, the *Newcastle Daily Chronicle*, the *Eastern Morning News*, the *Staffordshire Sentinel*, the *Nottingham Journal*, the *Eastern Daily Press*, the *Hampshire Independent*, and other journals have published articles and correspondence which prove beyond any doubt that the sympathy of the public is entirely with chemists. There is no sort of doubt about the result of the ultimate appeal.

On the other hand, the *Lancet* (November 16) had a two-page article, written in the most solemn style, urging the profound gravity of the art of diagnosis, and insisting that the question must be carried farther; but recommending that

a new case, in which the appeal for advice had been *bona fide*, should be taken. The *British Medical Journal* (November 16) is not surprised at the verdict, as the case for the plaintiffs was so weak, but fears that encouragement to wrongdoing and much public suffering may result from the *fiasco*. The *Medical Times and Gazette* (November 16) remarks on the weakness of the case, but insists that the medical practice of chemists must be dealt with in the interests of the public as well as of the profession. The *Medical Press and Circular* we quoted last month.

Two articles published in recent numbers of the *Pharmaceutical Journal* give the main facts of the origin of the 28th section of the Apothecaries Act. Elsewhere we also print a summary of the history of pharmacy previous to 1815. The facts in these historical sketches are to be found in Jacob Bell's "History of Pharmacy," and they prove very conclusively two things. First, that in the earlier struggles of the trade, the rights of chemists were fought for vigorously by the rich and powerful houses. The committee appointed in 1812 to oppose the attempt of the apothecaries to restrict the business of chemists and druggists, included the names of Allen, Plough Court; Bell, Oxford Street; Cooke, Southampton Street; Savory, Bond Street; and Hudson, Haymarket, Chairman. The second point is, that the Apothecaries Act was not passed, nor could have been passed, if it had not been for an assurance on the part of the solicitors of the Apothecaries Society, which is still on record, that their clients had no wish to insist on any clause not essential to their one object—namely, the promotion of medical knowledge in the profession. The 28th clause was offered and accepted as a guarantee that chemists and druggists should not be affected by the Act in any way whatever.

WEIGHTS AND MEASURES ACT, 1878.

A CAUTION.

CHEMISTS should carefully remember that on January 1 it will become illegal to sell as a pint or a pound any bottle which does not contain an imperial pint of fluid, or any package which does not contain an imperial pound. It will also become illegal to distribute circulars quoting the price of articles at so much per pound or pint when the quantities referred to are not the imperial measures.

To take a few examples, quinine wine must not be sold in ordinary wine bottles if they are called quarts, nor must 16 oz. of cod liver oil be referred to as a pint. Condyl's fluid, chloralum, Burnett's fluid, Sanitas, if the labels state the price of pints and half-pints, meaning 16 and 8 oz., must have those words crossed through with a pen or obliterated in some way. The responsibility in all cases will rest upon the retailer, though possibly he might have a civil claim on the manufacturer.

During the last week of the year it will be well to carefully look through the stock of "put up" articles, of trade circulars, hand-bills, and labels, and obliterate all quotations of weight or measure in which the weight or measure denoted is not strictly in accordance with the imperial standards. This is a matter of considerable importance as penalties may be inflicted for every single publication or sale; and informers are entitled to a considerable proportion of the fines in any case which they bring to conviction. The use of a handbill to wrap a box of pills would probably constitute publication, and the sale of a bottle, the label of which bears a wrong name, would be punishable even though the bottle itself were correct in measure. It will be legal to sell anything by the bottle, pot, jar, or box, or by "vessel," even when these do not signify any exact weight or measure.

Deputations have waited on the authorities urging that the so-called hundredweight of 112 lbs. should be abolished in favour of a weight of really 100 lbs. One proposed that the new weight should be called a quintal or cental, the other urged the retention of the old name.

THE "LANCET" ON CAPSICUM.

TRANSLATING an article from some German source, and working up the information thus acquired into something which looks like a very learned disquisition, is a process familiar to most editors. It will certainly provide an ample sprinkling of technical terms, and give the means of alluding with an air of familiarity to gentlemen with names which were apparently given expressly to figure in scientific treatises. Admiring readers will glance at the article and pass by on the other side; the one per thousand who may see the way the thing has been constructed is not likely to do more than smile to himself; and thus the article serves its purpose.

The *Lancet* lately gave its readers an article on Capsicum, in which Bucholz and Witting, Fellebar (*sic*) and Eberbach, Fleischer and Tresch (!), Buchheim and Hogyes are quoted with a good deal of effect. The curious fact that Herr Tresch's investigations coincide pretty closely with those of Mr. J. C. Thresh, of Buxton, is pretty clear evidence of the means whereby this article has been prepared, and, what is more important, shows how unacquainted was the translator with the elementary facts of the subject on which he professes to enlighten his medical readers.

Mr. Thresh's results have been by far the most important and striking obtained in connection with the chemistry of capsicum. Landerer and Witting's experiments are nearly 30 years old, and their deductions as to a base which they called "Capsicin" have long ago been shown to be incorrect. Buchheim's "Capsicol," on which Hogyes has lately been experimenting, and which the *Lancet* evidently takes to be the same thing as "Tresch's" Capsaicin, is most probably a compound formed in decomposing the capsicum, and certainly is not the active principle. The *Lancet* says that Fellebar described as the active principle a fluid alkaloid forming crystalline salts. Felletar (who is, no doubt, meant) described a certain fluid, but he did not claim that it was the active principle. Tresch, says the *Lancet*, has asserted that the active principle of capsicum is capable of causing death. Thresh has not asserted this, but he has referred to some experiments of Dr. Ringer, unknown apparently to the *Lancet*, which proved that 1-25th of a grain caused violent pain and purging. Hogyes having used capsicol instead of capsaicin, and apparently confounding the two, seems to regard the statements concerning the latter as exaggerated, and the *Lancet* translator, finding Hogyes's article, has apparently reproduced its substance in all innocence, and with a groundless faith in the infallibility of all chemical articles which may happen to appear in a German journal.

SUN SPOTS AND TRADE.

WE are anxious to give Professor Stanley Jevons every credit for his efforts to extract amusement, if not instruction, from the long-continued depression of trade which the world has suffered and still supports. At Dublin last summer the learned Professor read a paper in which he endeavoured to trace a connection between the maxima of sun-spots and the lowest points of commercial crises. The treatise was hardly regarded as a serious investigation, and it is only a subsequent paper, by the same author, in the pages of *Nature* which has shown that he is quite in earnest in regard

to his theory. It appears that some more recent observations have shown that the sun-spot maxima recur fractionally more frequently than had previously been estimated. This modification of earlier reckonings brings the intervals into closer correspondence with Professor Jevons' calculations as to the intervals of commercial depressions during the present century. The sun-spot maximum is said to recur every 10.45 years; the commercial crisis he has discovered to happen every 10.46 years. He has looked through the records of the last century also, fixing the periods when he wanted to find commercial depressions, and, as might be expected, he has found evidence of these. We imagine by ransacking old journals it would not be difficult to find some such evidence for most years of any century. The good times have not yet arrived which have satisfied everybody.

The idea, we suppose, is that sun spots have a distinct effect in increasing or diminishing the actual amount of energy in the world. It is even yet, we believe, a disputed point among physicists whether sun spots in extra number cause hot years or cold ones, or have any effect whatever on the temperature. As to their subsequent effects, the evidence is fully as strong that commercial crises cause them as that they cause these; and yet on such a wild guess as the one we have mentioned the Professor would have the British Government establish in various parts of its dominions sun-spot observatories! Though, if the intervals of commercial depression are so fixed, and the cause of them so utterly beyond our reach, we fail to see any sense or object in the employment of professors merely to record the inevitable changes. The test of scientific accuracy is prediction; Professor Jevons reckons the lowest depth of our present depression should have been reached last October. We are afraid if he had nothing better than sun spots to trust to for a revival of trade, the chances are against his calculations.

SCIENCE AND COMMERCE.

THE old theory that scientific men are not brilliantly endowed with commercial qualifications is an idea which is in a fair way of being exploded, as is evidenced by two or three recent instances.

The redoubtable Mr. Wanklyn complains, in a letter published in a recent issue of the *Sanitary Record*, that the discoverers of the ammonia process of water analysis have not had their fair share of employment in official investigations in which it has been adopted. He has now, he announces, in conjunction with his friend Mr. Cooper, made an improvement in water analysis, destined, he believes, to be as important a discovery as the ammonia process itself. Taught by experience, this process has been patented (!), with a view partly "for our own protection and security, and also as a guarantee to the public that our process shall not be inefficiently worked."

How dull scientific men have been in previous ages! The late Mr. C. Columbus might have made a handsome property if he had patented his notable discovery of America and issued licences for the use of his process of getting there.

An abstract of Messrs. Wanklyn & Cooper's patent will be found on another page.

The following, from *Nature*, seems to have been intended seriously, but Mr. Wallace will hardly thank his enthusiastic friends for so naïvely letting his cat out of the bag:—

"Mr. A. R. Wallace has reprinted from the *Fortnightly Review* his valuable paper 'On Epping Forest, and how best to deal with it.' It proves how well qualified Mr. Wallace is to have the care of what remains of the once extensive forest."

ANALYSM.

It is fortunate that when the magistrates and judges of our land, from the Chief Justice downwards, are in disagreement and confusion concerning the interpretation of the Sale of Food and Drugs Act, we have a Society of Public Analysts, with their journal, which is able and willing to supply their place and give decisions with the minimum of evidence, but with the maximum of confidence. At the meeting of the Society on November 20 the subject was discussed which has caused difficulty in the highest legal circles—whether an inspector who purchases merely for purposes of analysis is, or can be, prejudiced if he purchase merely for the purpose of analysis. The highest authorities seem to think he cannot be legally prejudiced. Mr. Wigner, however, considers that the inspector is not the real purchaser, who is, in his view, the public with whose money the purchase is actually made. However, he recognises the awkward fact that judges do not all take his view, and therefore he suggests that vestries might “follow the example of one of the London District Boards, and for the present, instead of prosecuting the vendors of samples found to be adulterated, direct these vendors’ names to be read out at the board meetings, in order that they may be published in the newspaper reports. This, at least, would have the advantage of giving a considerable degree of publicity to the facts shown by the analyses, and might even prove as strongly deterrent as a prosecution and a light fine at the police courts, the reports of which are too often kept out of the newspapers.” That is to say, let the analysts and the vestries between them sit in judgment, and so avoid the foolish formalities of courts of justice. The publication of names and crimes in newspapers in the manner suggested would serve also, as is apparently very delicately suggested, as an advertisement for the analyst; but the proposal is rather cool that the analyst is to have all the fun while the newspaper is to take the risk. The *Analyst* itself, righteously anxious to minimise as far as possible the dangerous effects of the check to the adulteration prosecutions which the Lord Chief Justice’s dictum has given, has started a little judgment-seat of its own, and commences by publishing an *ex-parte* statement made by the public analyst for Stockton as to seven samples of cream of tartar found adulterated with tartrate of lime, and one or two with other substances, such as bicarbonate of soda and sulphate of baryta. Proceedings are not to be taken, and *therefore* the *Analyst* thinks proper to publish the report of the adulteration. Could any declaration prove more conclusively the hopelessly one-sided way of looking on facts which has been a distinguishing feature of public analysts since they were first created?

CLERICAL SHOPKEEPERS.

THE feeling of the present age is not one of unmixt reverence for the priestly profession, and a recent movement, supported by many of the dignitaries of the Anglican Church, is hardly calculated to promote that humble spirit of pious docility which these gentlemen would fain recall from the dark ages. The Clergy Co-operative Association is the title of a new limited company which proposes to follow the examples offered by the civil servants and the officers of the Army and Navy. The following names are advertised as directors of this company, shares in which are freely offered to the public:—

The Rev. Edward Wm. Blore, Senior Fellow, late Tutor of Trinity College, Cambridge.

The Rev. Sherrard Beaumont Burnaby, Vicar of Hampstead.

The Right Hon. the Lord Lyttelton.

C. J. Ribton-Turner, Esq., Managing Director; late of the Charity Organisation Society.

The Right Hon. Viscount Sudley, one of Her Majesty’s Special Commissioners of Income Tax.

The Rev. J. Trontbeck, Priest in Ordinary to the Queen, Minor Canon of Westminster.

Sir Llewellyn Turner, Chairman of the Carnarvon Harbour Trust.

We also learn that “the movement has met with the approbation of the following clergymen (amongst others)”—

The Rev. Robinson Duckworth, Canon of Westminster, Chaplain to the Queen.

The Rev. T. C. Durham, Hon. Canon of Carlisle.

The Rev. F. W. Farrar, D.D., Canon of Westminster, Rector of St. Margaret, Chaplain to the Queen.*

The Rev. F. H. Fisher, Rural Dean, Chaplain to the Bishop of London, Vicar of Fulham.

The Rev. T. W. Jex-Blake, D.D., Head Master of Rugby School.

The Rev. H. Latham, Vice-Master and Tutor of Trinity Hall, Cambridge.

The Very Rev. the Dean of Lichfield, D.D., Prolocutor of the Lower House of Convocation, Province of Canterbury.

The Rev. S. Parkinson, D.D., Tutor of St. John’s College, Cambridge.

The Rev. S. G. Phear, D.D., Master of Emmanuel College, Cambridge.

The Very Rev. the Dean of Rochester, D.D.

The Rev. M. S. A. Walrond, Vicar of St. Lawrence Jewry.

The Rev. C. J. Vaughan, D.D., Master of the Temple, Chaplain to the Queen, Oxford Select Preacher.

As these gentlemen are about to inaugurate another “opposition shop,” they must not be surprised if tax-and-tithe-paying tradesmen look a little closely into their appointments. For instance, although we can have no desire to check the streams of piety which flow from our beloved Royal Family, it may be permitted to ask if, with a “Priest in Ordinary,” Her Majesty can need at least three chaplains. She may have a dozen more for anything we know, but, seeing no less than four of her specially-appointed ecclesiastical advisers in the little group we have named, it looks almost as if the idea of this new enterprise had been hatched at Windsor Castle.



AND

Literary Notes.

The Laws of Therapeutics.†

THE position attained in the medical profession by the author of the book before us is such as to ensure for his comments on the science and art of medicine a peculiar interest. Dr. Kidd is no doubt one of the most popular consulting physicians in London; and what is to be especially remarked is, that his reputation has not been gained by the means which are usually adopted by aspiring physicians. He has not hooked his name on to any special disease; he has not, as far as we know, written any books before this one; he has not introduced any startling innovations; he has not distinguished himself by eccentricity of manner; nor has he made public positions serve him as stepping-stones to fame and consequent practice. These are all well-recognised means whereby eminence is attained in the profession. But Dr. Kidd has not used any of them. So little known was

* We notice that Canon Farrar’s name has been omitted from the more recently published advertisements.

† *The Laws of Therapeutics*; or, *The Science and Art of Medicine*. A sketch by Joseph Kidd, M.D. London: C. Kegan Paul. 6s.

his method of practice that it has been a subject of dispute in medical circles whether he was or was not a homœopathist. That he had leanings that way was quite well known; but the allopaths declared and the homœopaths feared that he had abandoned the faith of his earlier days. When it was announced in the papers that Dr. Kidd had been telegraphed for to Berlin to attend on an eminent personage there during the Congress, it became a matter of serious importance in some people's eyes to know what was Dr. Kidd's medicalology. It would never do to have it circulated that the leader of the British Conservative party was treated by a homœopathic practitioner, and, referring to the subject, the *Lancet* oracularly declared that Dr. Kidd was not a homœopath. A few days after, this book, containing Dr. Kidd's confession of faith, came out, and while it will leave the author in somewhat the same isolated position which he has always occupied, it cannot now be fairly said that he has not defined that position with clearness as well as with much ability. A brief analysis of the book will probably be of sufficient interest for many pharmacists to whom the signature of the author has already become familiar through his prescriptions.

The author aims to trace, as far as possible, the laws which govern therapeutics, if there be such. The treatment of disease, he remarks, ought to be the most accurate of studies, and if there are laws of therapeutics, how important that something respecting them should be ascertained by the physician. How slowly we are progressing in that direction is strikingly illustrated by the remark made in one of the opening paragraphs of this book, and which can hardly be contradicted, that "the practice of physicians 30 years ago is at present regarded as worse than useless."

The history of medicine is then rapidly sketched, mainly with the object of indicating its chief teachers and "schools." The mingled good and evil of sect after sect are concisely pointed out, but it may surprise some of his readers—at any rate when they have read his book—to find Dr. Kidd, of all men, saying that "of all the sects, that of the Eclectics was about the worst;" and, further, that "Eclecticism in medicine is like the mule in creation—essentially barren." Coming to Hahnemann in this survey, the author declares that he adopted "with great delight the law of *similia similibus curantur* as the chief, though not the only, foundation for therapeutics." This is the key-note of the book, but Dr. Kidd carefully distinguishes between Hahnemann's "sober" teaching, and Hahnemann "drunk" with mysticism. The theories of dynamisation and infinitesimal doses he has cast aside *in toto*.

Physiology, pathology, and the natural history of disease are next treated with much acuteness. We see law at work in all these. Should the physiologist when he becomes a physician lay aside all search for law? Then we come to therapeutics. On this subject, the kernel of his work, Dr. Kidd avoids any comprehensive and final assertion as to the universality of any law; and, indeed, he finds that the Hahnemannic and the Galenic laws, diametrically opposed as they are, are both laws of nature. Nor does he even give any exact indication as to when similars or when contraries should be adopted. But what he aims to show is mainly that while a "contrary" remedy may *relieve*, it is usually left for a "similar" remedy to cure. This is illustrated by some remarkable cures of lithic acid gravel by small doses of nitric acid. Sir Henry Thompson has shown that while alkaline treatment will no doubt counteract the effects of uric acid, it will not check its formation. Dr. Kidd's contention is that, in such cases, as a rule, the treatment by acids in small doses follows the true law of cure. This principle is exemplified with respect to many other diseases, and the argument is supported by a large number of cases drawn from the author's own practice. The remaining chapters are on the "Ars Medica," "Obstacles to the Action of Medicine," "The Law of Counter Irritation," "Galvanism and Electro-magnetism," "Hydrophathy," and "Food."

We make no pretension to criticise Dr. Kidd's conclusions. It is, however, very satisfactory to find any practitioner seeking to establish in the true scientific method some approach to a law governing the medical art. If medicine ever does have any effect on disease, there must be some way of accounting for that effect, and every step towards the discovery of the laws under which it acts is a solid advance. The old-fashioned method of combining into one mixture all

the remedies which may have been recommended for some particular disease is the most hopelessly unscientific method of procedure. "Like a jewel-case which can be safely opened only by one key, disease has often to be unlocked. A cure is not accomplished till the special key is found." To hammer at the case as the energetic practitioner too often does, or to stand by and look at the lock as the mild disciple of the modern expectant method will do (we borrow the idea from our author), are both proofs of a want of appreciation of the truth that law reigns in the cure of disease as well as in all other phenomena of nature. Dr. Kidd has well acquired the right to speak by an extensive and successful practice, and whether the laws which he thinks he has discerned be the true ones or not, he has at least in this book given an example of observation and deduction which it would be well for medicine if others would imitate with a candour and a carefulness equal to his own.

The Pyrotechnist's Treasury. By Thomas Kentish. London: Chatto & Windus. 4s. 6d.

IN this work the author gives minute and thoroughly practical instructions for the preparation of every kind of firework, and also for preparing the necessary accessories, such as cases, designs, &c. The work is very technical, and, on first studying it, the difficulties and perils of pyrotechny seem almost magnified; but one who has already some slight acquaintance with the manipulation of fireworks, or one determined to acquire such an acquaintance, will find this volume an invaluable guide. It is abundantly illustrated, but all the drawings are collected at the end of the book, which much increases the difficulty of following the minute instructions conveyed. The author has had 35 years' experience, and has tried repeatedly every formula he recommends, as well as those which, to use a word of his own, he "discommends." He gives in this treatise a number of "wrinkles" on matters which appear trifling, but which could only be arrived at after tedious experience, and he explains a process for making "quickmatch" in a much more expeditious and easy method than is generally adopted. Fireworks are very profitable, if not specially useful results of chemical skill, and to those wishing to have an insight into the secrets of the manufacture, a more exhaustive description could not be recommended.

WE have received a few samples of Letts' Diaries for 1879. The large variety published by this firm will, no doubt, supply the requirements of those to whom our own Diary fails to give perfect satisfaction.

WE have also received from the same firm Captain Saxby's "Weather Almanac for 1879." The author professes to foretell the cyclonic storms and high tides of next year, from the basis of what he refers to as his "luni-solar theory."

"THE AGRICULTURAL STUDENT'S GAZETTE" contains a long and interesting article by Mr. Henry F. Moore on "Artificial Butter." The manufacture is carefully described, and the chemical questions involved are treated at some length. Some interesting details are given on the commerce in this article, from which we learn that 400,000*l.* are said to be invested in its manufacture in America alone.

"THE HOUSE SURGEON; OR, THE DOCTOR AT HOME," is a little pamphlet published by the Accident Insurance Company, and presented to their clients, or sold to others at 6*d.* It was written by the late Mr. Alfred Smee, F.R.S., surgeon to the Bank of England, and has reached a tenth edition. The object is to explain in the fewest possible words what should be done and what should be avoided in any of those sudden emergencies, such as fits, drowning, cuts, poisoning, choking, or in the minor accidents of daily life. The directions are generally given very tersely and clearly; but there are a few instances of over terseness, and some of an opposite fault. The following, for example, occur close together. Under "Mattery eyes," we are told, "Neglect for 24 hours may *irrecoverably* cause the loss of an eye *for ever*." In the next paragraph there occurs a recommendation to

"smear belladonna round the eyebrow." It is not stated whether the root, or the leaves, or the whole plant should be employed. Very useful engravings accompany the descriptions.

WE have received the introductory lecture delivered by Dr. Dyce Brown at the opening of the Winter session of the London School of Homœopathy. The author endeavours to prove that homœopaths treat a patient rather by recognising *all* his symptoms, while allopaths generally single out for treatment one symptom, a prominent one, probably, but not of necessity the most important.

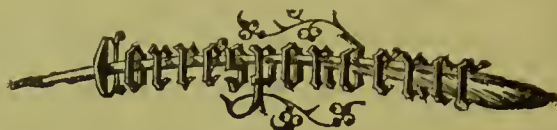
IN the Chancery Division of the High Court of Justice an application was recently made by Messrs. Trübner to restrain Messrs. Churchill from publishing a work by Dr. Cornelius B. Fox, "On the Examination of Water, Air, and Food," which was alleged to contain a reproduction of Professor Wanklyn's books "On Water Analysis" and "Milk Analysis." By consent, an *ad interim* order was made that an account of sales be taken until the hearing of the cause.

WE are indebted to the author for a little volume, entitled "Paper, Pens, and Ink," by Mr. Daniel Frazer, of Glasgow (published by Messrs. David Bryce & Son, of that city, at 1s.). It is, it appears, a reprint of a treatise on our writing materials, first published some years ago. Statistical, historical, and theological, this sketch is very interesting reading; and the concluding chapter, on "How and When we Began to Write," discusses these curious questions with much skilful speculation. Those who have been interested in Mr. Frazer's pharmaceutical essays—and who has not?—will follow him with pleasure in this little excursion to fresh fields and pastures new.

"HAYDN'S DICTIONARY OF POPULAR DOMESTIC MEDICINE," edited by the late Dr. Edwin Lankester, is now being republished by Messrs. E. Moxon, Son & Co. in twelve monthly 7d. parts. The work is an alphabetical arrangement and explanation of diseases, remedies, medical terms, and subjects more or less connected with the title quoted. Some few of the articles appear to be pressed into service with some superabundance of generosity. "Boots," "Beer," "Cider," for instance, are subjects which have to be trimmed up to fit them for appearance in this volume. Some of the advice given, too, would be none the worse if it were a shade more definite. For example, to state that the extract of male fern may be given in cases of tape worms, and should be taken on an empty stomach, leaves something to be desired by the "head of a family," who perhaps hears of the article for the first time. How is he to know without another book or further advice what dose he is to give?

MESSRS. HARDWICKE & BOGUE have commenced the publication of a series of "Health Primers," under the editorship of the following eminent medical men:—Dr. J. Langdon-Down, Dr. J. Mortimer-Granville, Henry Power, M.B., F.R.C.S., and John Tweedy, F.R.C.S. There are also named more than a dozen other gentlemen as contributors. A primer is only expected to give in distinct language the elementary principles and the axiomatic rules of the subject treated. Whether sanitary science, in its various aspects, can be taught to the classes whom it is important to address by a series of small manuals like these is a question we are hardly able to discuss. The attempt has most certainly our best wishes, and we may say that, as far as we have had an opportunity of examining the primers already published, they are conscientiously and skilfully written. The first of the series is entitled "Premature Death: Its Promotion and Prevention." Regarding all deaths not resulting from old age as premature, the writer (anonymous) gives an elaboration of the Registrar-General's reports, commenting on the facts with much acumen. He shows afterwards, but much too briefly to be of great service, what legislative regulations have been provided for the prevention of disease and preservation of health, and how these may be taken advantage of. This primer is followed by one on Alcohol,

by Dr. W. S. Greenfield. The author shows how great a part alcohol takes, both directly and indirectly, in the deterioration of health and of race, and he strongly advocates, if not total abstinence, at least great abstemiousness. "The House and its Surroundings," "The Skin and its Troubles," "Exercise and Training," "Baths and Bathing," "Clothing and Dress," "The Ear and Hearing," "The Eye and Vision," "The Head and its Troubles," are some of the titles of the rest of the series. Each volume is complete in itself, and contains about 100 pages royal 16mo., is bound in cloth, and sells for a shilling.



THE TRADE AND THE PROFESSION.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—Just as I was about to write you on this subject an application from the Local Secretary of the Trade Association came to hand. I consequently communicated my views to him, explaining that it was my intention to give them publicity through your Journal. I therefore enclose you a copy, which I shall be obliged by your inserting in your next issue.

I am, &c.,

JAMES PHILLIPS.

Church Stretton, December 2, 1878.

W. G. Cross, jun., Esq., Shrewsbury.

DEAR SIR,—In reply to yours received yesterday I enclose you as a donation to the Trade Defence Association, for although I am doubtful of the result (the judges favouring the Apothecaries' Company's cause), I should be sorry to withhold my mite, or to permit others to fight for trade interests without contributing a small sum to meet the necessary cost involved. I, however, think that more good might be done by seeking to effect a compromise with the Apothecaries' Company. They are evidently disgusted *ad suffiendum* with the action of many members of our trade, who, not content to prescribe over the counter, have habitually acted the part of qualified practitioners by attending, clinically and otherwise, cases of sickness, which have so frequently terminated in verdicts of manslaughter, or the repeated "discharge with a caution," that it was about time, they allege, for the interference of the law, and which I am sorry to see they now seek to enforce to the extreme, without a sufficient regard to the public interests involved. You will perceive, too, that many who styled themselves "Chemists and Druggists" before the passing of the Pharmacy Act were, from sheer ignorance of the nature and properties of drugs and chemicals, totally unfit to deal in them, much more so to administer or prescribe them in the treatment of disease, for which we, as an educated and vastly improved body, are now suffering. Many who dealt in drugs knew little or no difference between *tr. opi* and *tr. rhei*, *magnes sulphas* and acid oxalic, *rhubarb* and *jalap*, and the like, unless they were in bottles rudely labelled as such; and woe to the day when those labels were removed! But now this sort of thing is rapidly becoming a thing of the past, and is never likely to recur.

I would therefore suggest that now is the time to stir in the right direction, either by seeking a compromise with the Apothecaries' Company, by giving certain pledges as to non-interference with their privileges, other than in "prescribing over the counter in ordinary simple cases," which the Association appear to have already conceded, to which course they would not object, and which is not in reality their grievance; or by obtaining a legislative enactment to the like effect, upon public grounds.

A memorial to the Apothecaries' Company, showing our disposition to meet them in a conciliatory spirit, and asking for reasonable liberties, would meet with the general approval of the public, and a great proportion of the medical practitioners throughout the country would lend their influence in its support, and it would be of greater value than the spending of thousands of pounds in defending actions which practically leave us in the same position as that in which we started.

And, as to the last suggestion, I feel confident that Parliament would support any reasonable or well-grounded claims, either of the trade or of the public, by showing the necessity for it, and the fact of the important change in the qualification requisite before registration as a "chemist and druggist," as being but a trifle removed from that required by the Apothecaries' Company before entering its ranks, would much influence its decision.

The general public will be by far the worst sufferers in the event of this portion of our trade being severed; and when we consider the importance of such a restriction the effects produced by it appear to be truly lamentable. Take, for instance, the following cases:—

A village. No surgeon or medical practitioner within 8 or 10 miles. Persons taken ill suddenly with diarrhoea, colic, cholera, and the like, suffering excruciating pain; if not relieved may expire in great agony before the medical man can be communicated with, and, if otherwise, may then be reduced to hopeless and critical conditions. Yet a chemist, with all his means and skill at hand, and ready to devote himself to the relief of the anxious sufferer, when applied to, could only say, "I am sorry I am prohibited from giving you anything."

A person having swallowed poison in error rushes to a chemist, who coolly tells him, "Can't help you, sir; go and order your coffin." But, supposing the doctor's house has been sought and reached for a similar purpose, where is he? "Out till six!" or, perhaps, never to be found at home except at a certain hour after breakfast, when, if you fail to attend, you must keep the malady "in waiting until the following day."

To sum up, the trade and the medical profession should go hand in hand together, working for the common good. There should be a mutual understanding, and neither should attempt to usurp the rights of the other of them. By a general undertaking to this effect on behalf of the chemists and druggists, I have every reason to believe we should obtain assurances of good faith on the part of the profession, have done with the existing animus, and our calling would be rendered more assuring, and be upheld as an honourable and useful undertaking to the public advantage and security.

I trust you will explain these views at your meeting on Tuesday; and, wishing the Association every success,

I beg to remain, dear sir,

Yours faithfully,

JAMES PHILLIPS.

Church Stretton, December 2, 1878.

[We fail to see the appropriateness of our correspondent's suggestion. The Apothecaries' Society have chosen to challenge the chemists' right to dispense medicine for a trifling sore throat. There can be no possible doubt that they dispute the legality of counter practice in its very simplest form. What chance of compromise is there with such an enemy as that? They have lost their present action through their own bad management. The question has now become, as far as that case is concerned, a fight as to which side shall pay costs. The Trade Association are not likely to surrender the advantage they have at present gained, and the Apothecaries' Company have little chance of taking it from them this time. It may be, however, better policy in future to reserve all our strength for an appeal to Parliament rather than maintain a perpetual struggle with the Apothecaries' Company.—ED. C. & D.]

SHORTCOMINGS OF THE PHARMACEUTICAL COUNCIL.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—The debate on Mr. Hampson's motion that the Pharmaceutical Society should give a grant to help Mr. Shepperley's defence against the prosecution of the Apothecaries' Company has most conclusively shown which members of the present Council we may expect to show due regard for our trade interests; and I hope chemists will do as I intend, that is, keep a copy of the names of those who voted for and against the motion, that we may at the next election show we are unanimous in our views that we will not again call on those who voted against it for their *valuable time and assistance*. Doubtless, we shall find at the end of the following year we are still existing, and even in a better state, without them. The Trade Association will confer a great boon on us by putting forward men who, like Messrs. Hampson, Greenish, Churchill, Fairlie, Shaw, and Woolley, will try and improve the general welfare of chemists. Some of the present members of the Council seem to be in a perfect state of terror lest they should offend any medical man. This feeling is very easily understood, as they have businesses which are exclusively dispensing. My view, and I am supported by all my personal friends in the trade, is that they are utterly unsuited to represent us as a majority: we want men who have to depend on retail as well as dispensing, and who know it is perfectly impossible to refuse to give advice with medicines over the counter, or what I may call counter prescribing,

without loss of all their business. It is utterly absurd to say we cannot give a powder for child teething or a simple cough mixture without being subject to a prosecution and fine. The meeting on January 9 will, I hope, be a very large one, and we must unanimously show those members of the present Council whom I may call the "I-am-afraid-to-offend-the-medical-men party," that we will not have the apathy and neglect to our interests that has been shown persistently of late. One would conclude from the speeches of some of them, that all who dare oppose an apothecary, surgeon, physician, &c., in any way, ought to be annihilated without mercy. The *Pharmaceutical Journal* was the only paper I have seen which seems to have been dissatisfied with the verdict in Mr. Shepperley's case, and I consider it a most disgraceful fact that it was so. If, like your esteemed journal, it would take a little more interest in trade matters, or become even a little less scientific, we should not hear so many of our brother chemists remark that they would not trouble themselves to open it but for the correspondence, which is the only interesting part as a rule. Hoping to find a more able pen take up this matter, and urge on our brethren in trade the necessity to alter the present state of affairs, and that we shall at the next Council election get a better representative body of men in,

I am, sir, yours faithfully,

A DISPENSING AND RETAIL CHEMIST.

THE PATENT MEDICINE LICENCE.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—I quite agree with the remark of "X. Y. Z." in your last issue, proposing that the patent medicine licence should be increased from 5s. to 1l., and do not think chemists generally would object, providing they had the sole right of vending patents. I consider it a great injustice to the trade to permit "poisons" to be sold indiscriminately by unauthorised persons, such as grocers, hairdressers, and publicans, as is the case in this town, but hope to hear shortly of the Trade Association taking the matter in hand, and if properly supported will no doubt render good service in the future as it has done in the past, towards upholding the interests of the trade.

I remain, yours, &c.,

Tunbridge Wells, December 11.

G. E. B.

MEDICAL CLEANINGS.

GELATINE BASIS FOR LOZENGES.—Dr. W. Maeneill Whistler, Physician to the Hospital for Throat Diseases, recommends (in the *Medical Times*) pastilles containing two grains each of iodoform for the application of this remedy to the throat. He strongly recommends as a basis for this and other ingredients which are to be administered in the form of lozenges a "gelatine basis" thus prepared:—Refined gelatine, one part; glycerine, two and a half parts; flavoured water, two and a half parts; liquid cochineal, q.s.; to be made into a paste. This formula has been worked out by Mr. James, of the firm of Bullock & Reynolds, Hanover Street, and when required to be employed for the manufacture of any lozenges it is only necessary to melt it, mix the ingredients with it, allow it to cool, and finally cut it up into lozenges of the necessary size. The gelatine basis is non-irritating, dissolves slowly in the mouth, and furnishes a large quantity of mucilage, so that the remedy is kept in contact with the affected part for the longest possible time.

THE FIRST BRITISH HOMOEOPATHIST.—The venerable Dr. Frederick Foster Quin, generally recognised as the first to introduce Hahnemann's method of medical practice into this country, died in London on November 24, at the ripe age of 79. Of Irish family, but of Scottish birth, and educated at Edinburgh when that city was in the zenith of its intellectual fame, Dr. Quin in very early life won his way to an enviable position in society, and

secured a popularity among the highest classes, which he retained until his death. It seems a little too much to ask us to believe, however, as a morning paper asserts, that he was selected by Lord Liverpool's Government to be medical adviser to the Emperor Napoleon at St. Helena, but that the latter upset the arrangement by dying just as Quin was starting. Napoleon died in May, 1821, when Quin had just reached the mature age of 21. Such a commission on the part of the English Government of a mere boy as "medical adviser" to the fallen Emperor would have surely been a greater humiliation than all the irritations of Sir Hudson Lowe. Dr. Quin, however, soon after got an appointment to travel with Prince Leopold, afterwards first King of the Belgians, and he subsequently became Physician in Ordinary to the Duchess of Cambridge and general favourite at Court and in all the circles of the uppermost spheres of society. Of course, Dr. Quin's influence in giving tone to homœopathy was very great, and the establishment of the Homœopathic Hospital, which was his work, showed that he was not a mere *dilettante* believer in it. Of late the younger homœopaths have rebelled against Quin's "imperialism," and, some two or three years ago, the latter withdrew his name from their societies. But he never abandoned his belief in homœopathy, though for some years he has retired from general practice.

**

DISPENSING AT CO-OPERATIVE STORES.—The *Lancet* makes the following remarks:—"The practice of having prescriptions dispensed and purchasing drugs at co-operative stores is so rapidly growing that it becomes necessary to ask whether due care is taken to secure the services of qualified persons to conduct this portion of a very flourishing business. Drugs are not articles of consumption which it is safe to cheapen beyond reasonable limits, and in the dispensing of prescriptions skill must be engaged, which it is impossible to obtain except at a fair salary. We do not make any imputation on the quality of the medicines sold at stores, or impugn the qualifications of those who dispense them, but the matter is clearly one to which it is desirable to draw attention. The licence of the Apothecaries' Society for assistants, or the certificate of the Pharmaceutical Society, must, of course, be held by the dispensers engaged at these stores, and we think it is highly desirable, if not imperative, that this part of the establishment should be placed on a separate footing as regards the selection and testing of goods before they are distributed to the public. There can be no difficulty in adopting all necessary and expedient precautions in the conduct of this strange trade, seeing that the profits made by our amateur tradesmen are enormous." It seems extraordinary that a journal like the *Lancet* should be so ill-informed as to the law concerning pharmacy as to assert that the dispensers engaged at the stores "must of course" hold the certificate of the Apothecaries' Society or that of the Pharmaceutical Society. Will the writer tell us what law makes this obligatory?

**

PAYING PATIENTS AT ST. THOMAS'S HOSPITAL.—The Governors of St. Thomas's Hospital have taken the first step in a movement which may have important results. That institution, which was one of the wealthiest of London's charities, sold its old site to one of the great railway companies, some 20 years ago, for an enormous sum. Flushed with money, the Governors proceeded to plunge in a way which would have done credit to a young nobleman of sporting proclivities. They built a series of palaces on the Thames Embankment, opposite the Houses of Parliament, at such an expense that it has been calculated that they might more cheaply have provided their patients with apartments and every luxury in Cromwell Road, South Kensington. The result of this recklessness has been that the hospital has ever since been crippled. With 600 beds, they have never been able to afford accommodation to more than 350 patients, and they have only 13 wards out of 21 open. A scheme has now been prepared and submitted to the Governors to provide for the admission into one of the buildings of a certain number of paying patients from the class which, neither rich nor poor, has hitherto been entirely shut out of all chance of the best medical advice and hygienic aid. It is calculated that by this means the charity will

be relieved and able to extend to a larger number of the necessitous poor the benefits which it was specially designed to confer. It is not to be wondered at that the general practitioners, who see in this proposal a terrible opposition to themselves, should have raised an outcry. Their cause is supported by some of the medical journals, and it must be acknowledged that the experiment is a very dangerous one, tending, as it does, to turn the hospitals into commercial concerns. The medical staff of St. Thomas's have also been offended most unnecessarily, as it appears, by a careless disregard, of their convenience, advice, and even of the necessities of the hospital. But there is so much to recommend the scheme that, with all its dangers, we cannot but hope to see it carried out.

Trade Notes.

PLASTERS.—Now is the time to bring these forward. We notice that Messrs. Lynch & Co. offer an advantageous opportunity for buying plasters of the porous variety.

**

MESSRS. W. F. HUNT & Co., the makers of the patent plated bottle caps, have removed their warehouse and office from Hill's Place, Oxford Street, to 3, 4 & 5 Little Windmill Street, Golden Square.

**

MESSRS. NEWBERRY & SONS inform us that Messrs. Warner & Co., of Philadelphia, have been awarded a bronze medal at the Paris Exhibition for their coated pills, this one making five prize medals during six years.

**

SELLING A BUSINESS BY AUCTION.—An old-established drug business in Birmingham is to be put up to public auction on Thursday next, the 19th inst. Particulars will be found among our advertisements.

**

THE PROPRIETORS of the "Steamer and Globe" violet powder have fully vindicated their right to supply their preparation to the public under the title which it has so long borne. Chemists can therefore sell it with confidence.

**

THE ANALYSED TEA ASSOCIATION, hitherto of Bush Lane, Cannon Street, announce that henceforth Messrs. Ritchie & Pope, of 6 King Street, Borough, will act as wholesale agents. Proposals of agency are to be made to the last-named firm.

**

THE "DORÉ" TRANSPARENT GLYCERINE SOAP.—An excellent transparent soap, very handsome in appearance and pleasant in use, has been brought out by Messrs. Leath & Ross, to sell at moderate prices. Their price list in this number is worth attention.

**

WE are informed that the award to Mr. Hickisson for marking ink (daughter of the late John Bond's) has been improved from honourable mention to a bronze medal. The same firm has also received a second gold medal of merit from the Paris Society of Arts for superiority of production.

**

THE MONTSERRAT COMPANY have prepared from their Montserrat lime juice a second beverage, which is offered to the trade by Messrs. Evans, Sons & Co., of Liverpool, and Evans, Lescher & Evans, of London. The first is a summer cordial, known to many of our readers by the name of Linetta; the new one is especially a winter beverage, and is called "Aromatic Montserrat."

HARD TIMES.—Messrs. Stubbs & Co. recently, in a letter to the *Times*, gave the following account of the Bills of Sale registered during the middle fortnight of November. In 1875 the number was 542; in 1876, 589; in 1877, 674; and in 1878, 1,019. These facts indicate a pressure in the present year on the resources of thousands of persons far in excess of the ordinary state of affairs.

* *

PHARMACEUTICAL MAYORS.—Several chemists have this year been elected mayors of the boroughs in which they reside. Mr. William Ballard has been chosen Mayor of Abingdon for the fourth time; Mr. Alexander Bottle, as we mentioned last month, is elected Mayor of Dover; Mr. F. J. Clarke, of "Blood Mixture" renown, is the Chief Magistrate of Lincoln; Mr. F. Fisher, of the firm of Fisher & Ekin, is the new Mayor of Grantham; Mr. T. W. Price is elected Mayor of Arundel; and Mr. J. D. Williams, of Bodmin.

* *

THE HARMONIOUS DRUGGISTS.—The Masons' Hall Hotel, Basinghall Street, London, was occupied on the evening of November 20 by a large party of the employés of Messrs. Burgoyne, Burbidge, Cyriax & Farries. The evening was chiefly taken up by a musical entertainment supported entirely by the talent of the establishment. Mr. Cyriax was in the chair, and Mr. Farries in the vice-chair. The former gentleman contributed to the performance by a pianoforte solo, while songs, recitations, and dialogues filled up the rest of the programme. Tea and coffee and light refreshments were provided during the evening by the firm, and a microphone and a microscope offered tributary attractions.

* *

MESSRS. BEWLEY & DRAPER, of Dublin, whose aerated waters have competed sharply with whiskey as the national beverage of Ireland, have taken two medals at the Paris Exhibition for their products, and not one only as our list seemed to show last month. The extreme care adopted in their extensive works at Dublin to ensure the most perfect purity, both as regards water and machinery, is worthy of mention. This is one of the firms that really put sodium bicarbonate in their soda water. Their aromatic ginger ale was, we believe, almost, if not quite, the earliest attempt to adapt aerated waters to winter use, and it has proved a most successful experiment. Messrs. Bewley & Draper have received medals at previous exhibitions: at Dublin, Vienna, and Philadelphia, and their crowning double victory at Paris is handsomely deserved.

* *

THE "CONCINNUM" CIGARETTE MACHINE.—Among other French habits, that of cigarette smoking seems to have taken firm root among our gilded youth. As an aid to this luxury several interesting little machines have been invented, but none that we have seen combine so much perfection and elegance as one which has lately been introduced to us by the inventors, Messrs. Evans & Co., of Pinlisco, which they call the "Concinnum." The little machine, which has the appearance of a large snuff-box, or of a very small musical-box, is variously constructed in brass or nickel, or in a combination of wood and metal. It is fitted with half-a-dozen revolving cylinders, worked by a handle and tiny cog-wheels. After a very short practice the amateur can turn out perfectly-constructed cigarettes, with or without a mouthpiece. The cost of the instrument varies from half-a-guinea to 30s., a cost which is paid for by turning a pound or two of tobacco into cigarettes. One ounce of tobacco will make 30 good-sized cigarettes. As an

acceptable present for the season for a gentleman, or often we fear, for a lady, this machine will be appreciated, as it provides the means of ensuring cigarettes freshly made with good tobacco, and chemists who have a trade for cigarettes will recognise the profitable occupation of a little spare time in the manufacture of their own. Messrs. S. Maw, Son & Thompson are the agents.

* *

MALTINE is the title of a new candidate for medical favour, of the extract of malt family, which has become popular of late in consequence of influential commendation as a digestive and flesh-forming adjunct. This preparation differs from others of a similar class by being not an extract of barley malt only, but an extract of malted barley, wheat, and oats. Thus, it is claimed, the elements necessary to life are presented in their most perfect form. The maltine is also produced *in vacuo* at a temperature of not more than 120° Fahr., a distinct advantage when albuminous substances have to be treated. Maltine is a substance of pleasant flavour, of about the consistence of treacle, and it is sold either in its simple form or in combination with hops, hypophosphites, iron, cod liver oil, pepsine, beef and iron alteratives, &c. Messrs. J. M. Richards & Co., of Great Russell Street, are the sole agents.

* *

AN ILLUSTRATED CATALOGUE of soda-water apparatus, issued by John Matthews, of New York, the chief American maker of the counter soda fountains, &c., has been sent to us by the manager of the Silicated Carbon Filter Company, of Battersea. This catalogue contains illustrations and descriptions of no less than 33 different designs of marble ice-cream soda apparatus, many of which are also made in various sizes. Each has its distinctive name, chosen with some skill, as, for instance, the Icicle, the Danube, the Rhine, the Corinth, the Aphrodite, the Avalanche, and so on. The prices vary from \$68 to \$4,000. As a special attraction to his catalogue, Mr. Matthews adds as a *feuilleton* a certain soda water romance, which suggests in graphic sketches the dangers and defects of the apparatus turned out by "Pufts," and other opposition houses, and the superlative merits of those which are manufactured by the famous house of —, and then come some more trade particulars.

* *

ZOEDONE is a specialty in aerated drinks patented by Mr. David Johnson, F.C.S., and brought forward by Messrs. Evans & Co., of Wrexham. The aerated waters of this firm obtained honourable mention at Paris, and, in noticing the exhibit, our reporter suggested that "Zoedone" might become very popular if it were introduced at a reasonably low price. This suggestion seems to have led Messrs. Evans & Co. to reduce the price of the article, and to prepare it in as attractive a form as possible. It is an aromatic aerated solution, containing phosphoric acid, iron, and calcium. It is bright and sparkling, with a winery colour, and a flavour warm, slightly ehalybeate, not medicinal, but perhaps revealing a trifle too much capsicum. It is so handsomely put up that the mere external appearance of the bottle is almost enough to sell it. The price is 6s. a dozen. The bottles are the size of pint champagnes. It is recommended as a brain-and-nerve tonic for convalescents and harassed, overworked men. We can imagine few more delicate forms of flattery than a recommendation to use this beverage. It would seem to imply a considerable, if not profound, respect for the energy and industry of the person addressed, and a mild admiring wonder that he should be able to hold up under his severe mental strain. The suggestion that the

daily use of "Zoedone" would supply just the little phosphorus and food needed to guard the brain completely from all danger of overstrain and fag can hardly fail to please the customer or to lead to business.

TRADE CHANGES.

MR. C. SIMPSON SMITH, of Middlesborough, retires in favour of his nephew, Mr. Thomas Buck.

MR. E. PRESLEY has succeeded Mr. J. Hartland in the business at St. Augustine's Parade, Bristol.

MR. G. F. KNEEN, formerly with Messrs. Bradley & Bourdas, has succeeded to the business hitherto carried on by Mr. R. Steede, at Minden Terrace, Anerley Road, London.

MR. J. B. BURRELL, of Norwich, has purchased the business conducted for many years by Mr. R. B. Harrington at Rayleigh, Essex. The transfer was completed by Mr. Brett, of Leicester.

MR. J. J. COCKBURN, of Headingley, Leeds, has succeeded to the business of Mr. J. T. Clarke, 20 Great Clowes Street, Lower Broughton, Manchester. Mr. Brett, of Leicester, valued for both parties.

MR. WM. WHITTAKER, who has carried on business in Runcorn for 40 years, has lately retired, and is succeeded by his nephew, Mr. Peter Smith, who has assisted in the business for the past seven years.

MR. FREDERICK JONES, who has conducted a pharmaceutical business with success for the past 14 years, at 175 Kentish Town Road, has retired, and has disposed of his business to Mr. George Edwards.

Obituary.

BROAD.—On November 8, after an illness of 20 months, Mr. John Broad, pharmaceutical chemist, Hornsey Rise, aged 63. The late Mr. Broad was a well-known pharmacist, and only two months ago we commented on a proposal made by him which indicated his great interest in the affairs of the trade. His suggestion was the foundation of a prize for an essay on the separation of pharmacy from medicine, a project which his death will probably destroy. In his early days he passed some years in the pharmacy of Messrs. Godfrey & Cooke, and afterwards carried on business in Bedford Row, Barnsbury, Hastings, and finally at Hornsey. His delicate health occasioned his frequent removals, and doubtless checked his usefulness, otherwise he would no doubt have figured among our most active and liberal pharmacists.

BURNHAM.—On July 24, 1878, Mr. Henry Burnham, chemist and druggist, Patrington, Yorkshire. Aged 37.

CROLEY.—On October 28, Mr. Wm. Croley, pharmaceutical chemist, Causewayside, Edinburgh, aged 55.

DURBAND.—On September 30, Mr. Enoch Durband, Mill Street, Liverpool, aged 50.

FISHER.—On November 25, at Ramsgate, after a protracted illness of nearly twenty years, Charles Fisher, chemist. Aged 79.

FOULKES.—On October 16, Mr. Edward Foulkes, chemist and druggist, Town Hill, Wrexham, aged 37.

FULLEYLOVE.—On November 10, Mr. James Fulleylove, chemist and druggist, Netherton, Worcestershire, aged 47. He was apprenticed at Wolverhampton, to Messrs. Campion, Jones & Campion, and after remaining with the same firm

for several years as assistant, he commenced business on his own account in 1864 at Netherton, where his ability and energy, his agreeable manner and obliging disposition, secured for him a very successful career. About four years ago he had a severe illness, and has ever since been weakly and unable to attend to business properly, finally succumbing to diabetes and exhaustion. He leaves a widow and four young children to deplore his early death. He took an active interest in education, and was a zealous Christian worker, being both school-manager and churchwarden at the time of his death. His unostentatious piety and modesty, his generosity and ready sympathy with suffering humanity, endeared him to a large circle of friends, and the universal esteem in which he was held was displayed in a very marked degree by all classes both before and at the funeral.

JONES.—On November 19, 1878, Mr. Charles Jones, pharmaceutical chemist, Hanley. Aged 68. Mr. Jones was born at Etruria, the village founded by the first Wedgwood, in the year 1810. He was apprenticed about 1824 to Mr. Jabez Wilson, chemist, and remained with him until he became a bankrupt in 1826, in which year Mr. Jones purchased the business, which he extended considerably, and carried on until the day of his death. He was one of the founders of the Pharmaceutical Society, and was always a warm supporter of it. He was the local secretary, and also acted as secretary for the Defence Association. He had also been president of the North Staffordshire Chemists Association during its existence. At the incorporation of the borough he was chosen to be one of the first town councillors, which position he held for six years. For many years he was a deacon of one of the Independent chapels in the town, and all his life a strong believer in the principles of total abstinence. All the chemists of Hanley attended his funeral.

KING.—On October 31, Mr. Charles King, chemist and druggist, Marske-by-the-Sea, Yorkshire, aged 61.

LIVESEY.—On November 14, 1878, Mr. John Ward Livesey, chemist and druggist, Middleton, Lancashire. Aged 63.

OWEN.—On October 6, Mr. William Henry Owen, chemist and druggist, Charing Cross, London, aged 28.

REWCASTLE.—On November 11, 1878, Mr. John Rewcastle, chemist and druggist, Bedlington, Northumberland. Aged 52. Mr. Rewcastle was born, educated, and apprenticed at Newcastle-on-Tyne, and had conducted his business at Bedlington for the past 24 years.

ROUSE.—On November 10, Mr. Frederick Joseph Rouse, pharmaceutical chemist, High Street, Clapham, aged 67.

SHAW.—On November 1, 1878, Mr. Henry Shaw, chemist and druggist, Chesterfield. Aged 64.

WALKER.—On June 17, Mr. Thomas Walker, chemist and druggist, Peckham, aged 42.

WEST.—On October 9, 1878, Mr. James West, chemist and druggist, Fleet Street, Torquay. Aged 65.

WILLIAMS.—On November 16, Wm. Williams, at 30 Lorne Road, Finsbury Park, after a few days' illness, of serous apoplexy, aged 71. For upwards of 40 years the esteemed friend of Mr. Geo. Salter, 29 Red Lion Square. Respected by all who knew him.

HE DEALT WITH THE MAN THAT ADVERTISED.—The London correspondent of an American journal tells how, on a visit to Paris, he met an American gentleman who was using a pen of peculiar construction, designed with special regard for those unfortunate persons whose fingers will get inked in writing. The correspondent, being subject to the complaint, was attracted by this pen, and getting the address of the stationer who had sold it, he sent the money for one from Paris to Omaha. "By the last steamer," he says, "it came to me. The stationer at Omaha was out of them, but he sent to Sioux City to the man that advertises them for another lot. And now here is where the laugh comes in. The pens are an English invention, and tons of them can be bought in London if desired. At the stationer's next door I could have got what I had sent after to Sioux City. But how could I know that? I dealt with the man that advertised."

FORMULÆ OF SECRET MEDICINES.

(Continued.)

The Formulæ given below are translated (by special permission of the author) from a German collection compiled by Mr. Edward Hahn, Apotheker. The names following most of the Formulæ are those of the authorities quoted for the analysis. The weights are almost invariably given in metric denominations. 1 gramme is equivalent to 15½ grains. The prices quoted are the nearest English equivalents to the original retail price.

BERGMANN'S EISPOMADE, OR HAARKRÄUSELENDE EISPOMADE.—Ice pomade, or hair-curling ice pomade, is ordinary pomade.

HAIR-CURLING ESSENCE (Moras).—A solution of .6 gramme colophony in 50 grammes spirit perfumed with musk and bergamot oil. 1s.—*Fink*.

HAARMITTEL (Julius Scheinich, Löbau, Saxony).—1. "Régénérateur."—120 grammes of a slightly aromatic fluid which separates into two layers; the upper consists of Provence oil, the lower of a mixture of glycerine and spirit in equal parts, coloured with aniline violet, and perfumed with Peru balsam. 2. The "Prepared Paper" is very thin unglazed parchment paper. 3. "Régénérateur."—Yellow palm oil, mixed with some wax, a substance of animal origin, and a pulverulent body, which contains a dye, and is not bitter.—*Hager*.

HAAR-NATURALISIRPRÄPARAT—NATURAL HAIR-PREPARATION (Chemiker Lattke, Kiel).—A comparatively strong solution of lead acetate, containing in suspension a small proportion of milk of sulphur. See also "Eau de Fée."—*Himly*.

ROSETTER'S HAIR REGENERATOR.—A hair dye consisting of rose water, 345 grammes; glycerine, 50 grammes; milk of sulphur, 2 grammes; sugar of lead, 1.5 gramme. 6s.—*Hager*.

HAIR RESTORER (Fr. Brabender, Apotheker, Cleves).—For dyeing the hair. 380 grammes of fluid, containing sugar of lead, 5 grammes; hyposulphite of soda, 20 grammes; glycerine and orange-flower water, 20 grammes. 2s. 6d.—*Wittstein and Hager*.

HAIR SPIRIT (from the Rosen-Apotheke, Nuremberg).—A hexagonal eau-de-Cologne bottle, holding 100 grammes of fluid, clear as water, coloured slightly green, and without noticeable odour. It proves to be a solution, in water, of .4 gramme crystallised copper sulphate with some common salt. The label on the bottle bears:—"Directions for Use. A coffeespoonful of this spirit should be rubbed into the scalp every evening. It is advisable to use good hair oil or pomade, lest the spirit should make the hair brittle. It is particularly successful with persons suffering from nervous diseases, and its use for a short time stops the falling out of the hair, and produces a remarkably rapid fresh growth.—R. Woesch, Nuremberg. 1s.—*Hager*.

HAIR-STRENGTHENING SALVE—POMMADE DES CHÂTELEINES (Chalmin, Paris).—A mixture of hog's lard with resin, gamboge, benzoin, and an ethereal oil.—*A. Casselmann*.

ENGLISCHES HAARWASSER—ENGLISH HAIR WATER (Herrn Maschke, Hof und Feld Apotheke, Breslau).—Consists of a salt of lead with glycerine and sulphur.—*Kuhr*.

HAIR WATER (Laforest).—A decoction of 130 parts red wine, 1 part common salt, 2 parts iron sulphate, and 1 part verdigris, in which 2 parts galls have been subsequently macerated.—*Hager*.

OSTINDISCHES HAARWASSER—EAST INDIAN HAIR WATER (Emil London, Berlin).—Lead acetate, 1.5 gramme; water, 200 grammes; glycerine, 60 grammes; precipitated sulphur, 3 grammes. 3s.—*Hager*.

HEMORRHOID POWDER (Wolf).—A box of 10 powders, each weighing 4 grammes, and consisting of flowers of sulphur, 65 parts; white magnesia, 15 parts; Austrian rhubarb, 10 parts. 3s. 6d.—*Hager*.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, successor to L. de Fontaine-moreau & Co., 4 South Street, Finsbury, London; and at Paris and Brussels.]

Applications for Letters Patent:—

Anthracene.—No. 4517.—J. Hardman, of Milton, Staffordshire, manufacturing chemist, and G. Wischin, of Milton, Staffordshire, chemist. Improvements in the production of anthracene. Dated November 7, 1878.

Ammonia.—No. 4526.—J. Young, of Kelly, North Britain. Manufacturing ammonia. Dated November 8, 1878.

Ammonia.—No. 4544.—C. A. Fawsitt, of Manchester, analytical chemist. Improvements in obtaining ammonia. Dated November 9, 1878.

Beverage.—No. 4563.—W. H. Crispin, of 156 Haverstock Hill. An improved beverage. Dated November 11, 1878.

Box for Holding Dentifrice, &c., Powders.—No. 4768.—J. H. Johnson.—A communication from W. H. Hall, of New York, United States. Improvements in boxes for holding dentifrice rouge, burnishing or cleaning powders, or other substances or liquids. Dated November 23, 1878.

Collecting and Discharging Fæcal Matters.—No. 4902.—E. Schleh, of Ehrenfeld, near Cologne, Germany, civil engineer. Improvements in apparatus for collecting and discharging fæcal matters from dwellings, and for rendering innocuous the gases arising therefrom. Dated December 2, 1878.

Colouring Matters.—No. 4489.—J. C. Newburn.—A communication from A. F. Poirrier, manufacturer, D. A. Rosenstiehl, chemist, Paris. The production of new colouring matters from phthalamine. Dated November 6, 1878.

Colouring Matters.—No. 4490.—J. C. Newburn.—A communication from Z. Roussin, chemist, and A. F. Poirrier, manufacturer, both of Paris. The production of new colouring matters by the reaction of the diazoic derivatives of nitramine or other diazoic derivatives upon amines, amides, and phenols. Dated November 6, 1878.

Colouring Matters.—No. 4491.—J. C. Newburn.—A communication from Z. Roussin, chemist, and A. F. Poirrier, manufacturer, both of Paris. The production of new colouring matters by the reaction of the diazoic derivatives of toluidines and xylydines upon amines, amides, and phenols. Dated November 6, 1878.

Colouring Matters.—No. 4914.—F. Wirth.—A communication from W. Meister, E. Lucius, doctor of philosophy, and A. Brüning, doctor of philosophy, all of Höchst-on-the-Main, Germany. Improvements in colouring matter and in the manufacture of the same. Dated December 2, 1878.

Curative Magnetic Apparatus.—No. 4903.—R. Lonsdale, of Milo End Road, London. Improvements in magnetic apparatus to be employed for curative and remedial purposes. Dated December 2, 1878.

Disinfection of Fæcal.—No. 4807.—A. B. De Podewils, of Munich, Bavaria. Improvements in the treatment or disinfection of fæcal and other solid and liquid matters, in the manufacture of manure, and in apparatus employed therein. Dated November 26, 1878.

Distillation of Hydrogenised Matters.—No. 4640.—W. R. Lake.—A communication from H. Despuher. Improved processes and apparatus for the distillation of hydrogenised matters, and for similar purposes. Dated November 15, 1878.

Filter.—No. 4854.—P. A. Maignen.—A communication from J. Retif, of Lyons, France. Improvements in the construction and arrangement of apparatus for filtering water and other liquids. Dated November 28, 1878.

Inhalers.—No. 4554.—W. L. Shepard, of 15 Euston Road, London. An improved apparatus applicable as an inhaler, bronchitis kettle, and portable vapour bath. Dated November 9, 1878.

Manufacture of Tartaric Acid.—No. 4684.—F. Wirth.—A communication from H. Goldenberg, Doctor of Philosophy, of Wiesbaden, Germany. A new method of recovering the potassium of the tartar in the form of hydrate of potassa in the manufacture of tartaric acid. Dated November 18, 1878.

Manures and Phosphates.—No. 4558.—S. G. Thomas, of 3 Queen's Road Villas, Queen's Road, Battersea, London. Improvements in the manufacture of manures and phosphates. Dated November 9, 1878.

Medicinal Beverage.—No. 4483.—A. Nelson, of Margate, Kent. An improved preparation or beverage having nourishing and medicinal qualities. Dated November 6, 1878.

- Refining, &c., Saccharine Liquids.**—No. 4586.—H. J. Haddan.—A communication from J. W. Decastro, of New York, United States. Improvements in the defecation, decolorisation, and refining of saccharine liquids. Dated November 12, 1878.
- Stoppers.**—No. 4557.—G. Taylor, of Liverpool. Improvements in and relating to stoppers for feeding bottles. Dated November 9, 1878.
- Stoppers.**—No. 4731.—H. Barrett, of Hampton, Middlesex, and John Bailey, of Silvertown, Essex. Improvements in the manufacture of stoppers for bottles for containing aerated or gaseous liquids. Dated November 21, 1878.
- Letters Patent have been issued for the following :—
- Ammonia.**—No. 3341.—J. P. Rickman, of 17 St. Brides Street, London. Improvements in the manufacture of ammonia and in the apparatus for that purpose. Dated August 24, 1878.
- Caustic Alkalies.**—No. 2203.—E. P. Parnell and J. Simpson, of Liverpool, manufacturing chemists. Improvements in the manufacture of caustic alkalies, and in apparatus or appliances employed therein. Dated June 1, 1878.
- Chemical Treating of Raw Maize.**—No. 2321.—A. Sezille, of Lavallois Perret, France. An improved method of treating raw maize for use in the manufacture of sugar, glucose, fecula, alcohol, and beer, the basis of the process being the chemical decortication of the germs of the maize before using this grain in these various industries. Dated June 10, 1878.
- Druggists' Paper Bags.**—No. 3029.—A. M. Clark.—A communication from N. J. Alexander, of Anston, Tex., United States. An improved paper bag for putting up druggists' powders and other similar purposes. Dated July 30, 1878.
- Phosphoric Acid and Superphosphates.**—No. 2182.—F. Wirth.—A communication from C. Müller and A. Packard, both of Wetzlar, Germany. Improvements in the method of and in apparatus for manufacturing phosphoric acid and superphosphates. Dated May 31, 1878.
- Syrup for Digestible Purposes.**—No. 3884.—E. Beanes, of Dulwich, London. A new or improved manufacture of syrup to be used for digestible purposes in food. Dated October 3, 1878.
- Soda.**—No. 3022.—A. Allbusen, of Gateshead, Durham, manufacturer. Improvements in the manufacture of soda. Dated July 30, 1878.
- Treating Sewage.**—No. 2733.—W. L. Wise.—A communication from Dr. F. T. M. Droncke, of Bockenheim, near Frankfurt-on-the-Main, Germany. Improvements in treating impure water or liquid to purify the same, which improvements are especially applicable to the treating of sewage to obtain certain products therefrom. Dated July 8, 1878.
- Vaginal Injections.**—No. 2055.—H. A. Dufrene.—A communication from Mon. A. Audouin, of 69 Rue de Lille, Angoulême, France. An improved apparatus for vaginal injections. Dated May 23, 1878.

ABSTRACTS OF SPECIFICATIONS.

For permission to print the following we are indebted to the courtesy of the *Engineer* :—

- 1543. Apparatus for Weighing, &c., G. Westinghouse.**—Dated April 17, 1878.—(Not proceeded with.) 2d.
- A vessel containing liquid is covered with a flexible diaphragm, and on it is placed the weight or strain to be ascertained. From the vessel a pipe is led to a column of mercury or other pressure gauge.
- 1307. Bottling Machine for Aerated Waters, L. Rose.**—Dated April 3, 1878.—(Void.) 2d.
- This consists of the ordinary upright plate or stand with back or other support. On the right and upper portion is attached a filling and syringing pump, the novelty of which consists in the piston being formed of the same diameter, and about the same length as the cylinder, in place of the ordinary form of piston, consisting of rod and bucket attachments as at present in use.
- 1450. Manufacture and Drawing Off of Aerated Waters, E. Howard & T. Faradon.**—Dated April 11, 1878. 6d.
- One reservoir is employed wherein the water is deprived of its air, and one receiver or condenser wherein the water thus prepared, together with the carbonic acid or other gas, are simultaneously pumped or otherwise forced under any usual or required pressure, and by any convenient fluid-exhausting and forcing appliances.
- 1476. Artificial Fuel, F. Dixon.**—Dated April 13, 1878. 4d.
- Coke is reduced to a state of granular division, and mixed in a pug mill with 2 parts of a solution to 18 parts of coke. The mixture is then heated and compressed to any desired form. The solution consists of 1 part ground rice mixed with 9 parts water and 15 grains of aluminate of potash, and 10 grains borax or borate of soda. The whole is boiled and then run off into a boiler containing 10 parts commercial size, and 90 grains of bicchro-

mato of potash. The mixture is again boiled, and upon steam being admitted again to the boiler, the solution is forced into a tank, whence it passes to the pug mills.

- 1575. Apparatus for Atmospheric Purification, W. Lawrence.**—Dated April 18, 1878.—(Not proceeded with.) 2d.
- A receptacle contains a suitable vehicle of sufficient evaporative surface steeped in tar, and the canister has suitable inlet and outlet pipes furnished with regulators, by means of which air enters and leaves the apparatus.
- 1586. Copying Ink Powder and Extract, W. R. Lake.**—Dated April 18, 1878.—(A communication.)—(Not proceeded with.) 2d.
- Ink powder of a dark violet colour is produced by the solution in water and the evaporation of the following materials :—Aniline colour, ten parts; sugar, four parts; gum arabic, one part; and syrup of glucose, one part. In the same manner red, green, and other coloured inks may be obtained. Black ink powder is produced in the same manner, excepting that instead of ten of aniline colour only, eight parts of nigrosine and two parts of the substance known as Bismark brown are used, that is to say, ten parts together.
- 1459. Preparing Cotton or Flax Wool for Surgical Purposes, A. Ford.**—Dated April 12, 1878.—(Not proceeded with.) 2d.
- Cotton or flax wool is combed and treated with a solution of caustic alkali, after which well washed and pressed to remove all moisture it may have absorbed. Cotton and flax thus treated are rendered capable of readily absorbing fluid, and are used for various surgical purposes.
- 1504. Determining Organic Matters Contained in Solutions, J. A. Wanklyn & W. J. Cooper.**—Dated April 15, 1878. 4d.
- A "standard" solution of permanganate of potash as the oxidising agent is employed, and the quantity of permanganate employed is measured in the usual manner, but instead of simply adding the permanganate to the acidified solution, the solution is rendered alkaline, and it is then boiled with a known quantity of the permanganate, thereby oxidising the organic matters at boiling heat. The liquid is then allowed to cool, acidified, and then by any ordinary process it may be ascertained how much permanganate remains unconsumed.
- 1474. Enemas, Syringes, &c., J. G. Ingram, sen.**—Dated April 12, 1878. 6d.
- This consists in manufacturing enemas, syringes, and other similar articles, comprised of a barrel, ball, or reservoir and two tubes, connected one to each end thereof in one continuous body of indiarubber, thereby dispensing with the usual metallic and other connections between the ball, barrel, or reservoir and the tubes.
- 1298. Filter-presses, E. C. Prentice.**—Dated April 2, 1878. 6d.
- One or more rings or frames are placed between end covers, held together by bolts. The internal surfaces of the ends are covered with a wire or wicker mat, on which are laid suitable fabrics constituting the filtering medium.
- 1522. Galvanic Batteries, P. Grabinger.**—Dated April 16, 1878.—(Not proceeded with.) 2d.
- A band of carbon corresponding to the size of the vessel, and a like band of amalgamated zinc are introduced into the vessel and maintained at their upper part at a suitable distance from and parallel to each other in the closing cork, so that the bands do not touch the bottom when the vessel is closed by the cork. The connection of the carbon with the conducting wire is effected by means of a small plate of platina, and the parts of connection have washers of hardened rubber.
- 1532. Gloves for Use in Surgical Operations, T. Forster.**—Dated April 17, 1878. 2d.
- A mould of plaster or other suitable material is dipped into a solution of indiarubber and then dried in a stove, after which it is cured or vulcanised, and the article removed from the mould.
- 1517. Treating Gums and Oils for the Production of Varnish, F. S. Barff.**—Dated April 16, 1878. 4d.
- This consists in the employment for the purposes of heating, melting, and incorporating of superheated steam at specific temperatures, applied externally, or by means of pipes or coils, placed or circulating in or amongst the gums or oils to be heated.
- 1297. Inhalers, H. J. Haddan.**—Dated April 2, 1878.—(A communication.)—(Not proceeded with.) 2d.
- This consists in furnishing receptacles with a movable inner receptacle, furnished with a tubular neck supported by the stopper of the main receptacle, the said inner receptacle being also furnished with two tubes, an upper or air tube communicating with the external air passing through and supported in the tubular neck, and a lower tube passing through the bottom of the inner receptacle and communicating with the fluid in the main receptacle and extending upwards into the inner receptacle; and in supplying a tube fitted with any convenient flexible or other arrangement by which the inhalation is to be performed, and passing such tube into and through the stopper.

1573. PREPARED Liquors for Mixing with Aleoholie AND VINOUS SUBSTANCES, &c., A. Collingridge and R. F. Lecerf.—Dated April 18, 1878. 4d.

In lieu of water only being used as an agent for the reduction of and admixture with aleoholic and vinous substances, distillates of infusions or decoctions of the leaves of the Chinese or other Asiatic tea shrub are employed.

1529. Manure, H. Hartmann.—Dated April 27, 1878. 4d.

The component parts of the manure are—150 parts by weight of bone dust or bone ash; 315 ditto phosphate of lime; 576 ditto caustic lime; 1,800 ditto brown coal, or lignite, or peat; 999 ditto clay loam, silicate; 330 ditto gypsum; 1,100 ditto kainit; 154 ditto carbonate of soda.

1487. TREATMENT OF Paper for Prevention of Fraud, A. A. Nesbit.—Dated April 13, 1878.—(Not proceeded with.) 2d.

Added to the pulp is an alkaline solution of peroxide of iron and ferrocyanide of potassium. Upon the application of a chemical to paper thus treated a colour or stain will be produced.

1444. MANUFACTURE OF Picric Acid, B. Siegler.—Dated April 11, 1878.—(Not proceeded with.) 2d.

To nitric acid is added as much slack lime as it will dissolve, and to the nitrate of lime thus formed is added half its weight of carbohc acid, the whole being left for twenty hours, after which it is gradually heated. During the twenty hours it is left mono-nitric phenol has been formed, and the heating converts the whole into the nitro-phenol, which is combined with the lime as picrate of lime. Muric acid is then added, which dissolves the lime, and the picric acid is precipitated.

1526. COATING AND Preserving Metals, A. M. Clark.—Dated April 16, 1878.—(A communication.) 4d.

One kilog. of borate of lead is ground in a water-mill and placed in a vessel to settle, when the water is drawn off. Twelve grammes of chloride of platinum crystals are then dissolved in a litre of distilled water and 25 centilitres of ammonia are added, small quantities at a time, the whole being well stirred with a glass spatula. The ammonia precipitates the platinum, when the ammoniacal water is decanted and replaced by pure water, when it is again stirred and allowed to settle a second time, when the water is again drawn off and the platinum obtained mixed with the borate of lead in the mill. Five litres of water are then added, when the metal to be coated is cleaned and dipped in the composition, and then placed in a muffle and the heat raised until the composition changes from a white to a black colour, when the metal is removed and allowed to cool.

1386. APPARATUS AND MATERIALS FOR Producing Gas, A. Aitchison and R. N. Taylor.—Dated April 8, 1878.—(Not proceeded with.) 2d.

A mixture of creosote, petroleum, and resin oil is supplied to a retort situated behind the fire of a range in the form of a rectangular stove, and the gas generated passes thence by a tube to a suitable gas holder.

1494. APPARATUS FOR Registering the Flow of Liquids, J. E. Holme.—Dated April 13, 1878.—(Not proceeded with.) 2d.

This consists in the application to the ordinary liquor tap of a vertical chamber or reservoir, with an inlet from the top at the upper end, and at the lower end an outlet communicating with a horizontal plug capable of being turned on its axis a limited distance, such plug having connected to it an open measure of such capacity as, together with the chamber of the plug, to form the standard of measurement required.

1486. MANUFACTURE OF BUOYANT OR Floating Soap, W. R. Lake.—Dated April 13, 1878.—(A communication.) 6d.

A piece of cork or other substance of less specific gravity than water is encased in the cake of soap, thereby rendering the latter capable of floating on the surface of the water. The same effect may be obtained by forming central cavities in the soap.

1601. CLEANING, FILLING, AND Stoppering Bottles, F. B. Michell.—Dated April 20, 1878. 6d.

The bottle is formed with two compartments communicating with each other through the centre, the top chamber being formed so as to prevent the internal stopper turning over from its proper position. The stopper is formed so that a slight pressure on the top opens apertures therein and allows the escape of the free gas in the bottle, when the cork falls easily away from the mouth of the bottle to allow the passage of the liquid. The bottles are filled on a hinged cradle, the mouth being forced on to a nipple, and when full the cradle is turned over, causing the stopper to fall into place, where it is kept by the pressure of the gas. The bottles are cleaned by introducing a revolving brush through the neck, the exterior of the bottle resting on a second brush, thus cleaning both parts simultaneously.

1565.—Shaving Soap, OR LATHER, A. Hampel.—Dated April 18, 1878.—(Not proceeded with.) 2d.

The soap or lather is composed of 6·6 per cent. of cleansed olein, 13 per cent. hot water, 5·4 per cent. soda ley at 25°, 12·5 per cent. best white soap, 50 per cent. boiling water, and 12·5 per cent. spirit at 90°.

1536. Stoppering ON COVERING Bottles, JARS, CASKS, &c., H. H. Bulkeley-Johnson.—Dated April 17, 1878. 6d.

Two rigid cones, or frustrums of cones, with an intermediate larger flexible or elastic washer, are threaded upon a wire rod, and secured by an adjustable nut.

1523. MANUFACTURE OF Sulphuric Acid, F. Wirth.—Dated April 16, 1878.—(A communication.)—(Not proceeded with.) 2d.

This relates to a means of increasing the quantity of anhydride resulting from the roasting process, and to producing the same as a combination of the roasting process. The gases obtained by the roasting process in the manufacture of sulphuric acid are conducted through enamelled tubes of graphite, cast iron or other suitable conduits, which are highly heated. These conduits are filled with water, pyrites, peroxide of iron, platinised asbestos, or other similar materials.

1410. Stoppers FOR BOTTLES, &c., W. R. Lake.—Dated April 9, 1878.—(A communication.) 6d.

A wooden shaving is rolled tightly round a wooden pin, of a length corresponding to the breadth of the shaving, and both ends of the shaving are fastened by a suitable adhesive substance.



LIQUIDATIONS.

- ABBOTT, JOHN, Worlingworth, veterinary surgeon and horse-breaker November 18.
- ALLEN, JOHN THOMAS, 136 Fenchurch Street, and 30 Conduit Street, Plumstead, late oil, drug, and chemical merchant. November 27.
- BURGOYNE, HENRY, 38 Somerset Street, Barnsley, surgical instrument maker, late the Woodman Inn, South Street, Moor, Sheffield, inn-keeper. November 7.
- CLEMENTS, HENRY, 70 Hill Street, late 131 East Street, Walworth, aerated water manufacturer. November 23.
- COLBECK, JOHN, 2 Victoria Street, Kilnhurst, chemist. November 16.
- COURT, ALFRED, 1 Hockley Hill, Birmingham, and Birchfield Road, Birchfield, druggist and drysalter. November 21.
- CROZIER, WILLIAM, 16 Queen's Lane, Newcastle, druggist and drysalter. November 26.
- DIX, HENRY, 57 Downing Street, Chorlton-on-Medlock, Manchester, tailor and patent medicine manufacturer and vendor. November 25.
- ELLIS, JOHN, 34 Hope Street, late 15 Upper Pitt Street, Liverpool, veterinary surgeon. November 14.
- FLEMING, WILLIAM, 21 Bank Street, Padiham, surgeon. November 8.
- FOGG, ROBERT, 60 Deansgate, Bolton, chemist. November 22.
- FOSTER, EDWARD, 50 Friargate, Preston, chemist. November 29.
- GIBSON, WILLIAM, 63 Bartholomew Close, surgical-instrument maker. December 2.
- GODDARD, WILLIAM HENRY, 1 Paxton Street, and 21 Windsor Street, Barrow, dentist. November 14.
- GROVES, EDWARD, Gothic House, Hunslet, surgeon. November 12.
- HARRISON, FRANCIS, Cleveland Street and Dansom Lane, Hull, cooper and stearine manufacturer. November 23.
- HARRISON, HORATIO JAMES, 78 Hanover Street, Manchester, and 31 Clifford Street, Hulme, drysalter. November 19.
- JAMES, HENRY, Broad Street, Ross, and Mitcheldean, chemist. November 28.
- JONES, LLEWELLYN BIBBY, Bagillt, Flint, aerated water manufacturer. November 25.
- JONES, JOHN THOMAS, Charles Street, Milford Haven, chemist. November 18.
- LEIGH, THOMAS, 69 King Street, Blackburn, herbalist, and Weir Street, Blackburn, aerated water manufacturer. November 9.
- MANSON, RICHARD TAYLOR, Howdon-le-Wear, physician and surgeon. November 22.
- MAUSDEN, JOHN, Savile Town, Thornhill, mineral water manufacturer. November 14.
- MONK, JOHN, 26 Alfreton Road, Nottingham, mineral water manufacturer, November 19.
- ORRELL, ANDREW PEEL, 3 Red Earth Road, Over Darwen, drysalter. November 20.
- PARKER, JOHN, 45 and 46 Parade, Birmingham, late aerated water manufacturer. November 22.
- PROBYN, JOHN SUTHERLAND HOWELL, 81 Guildhall Street, Bury St. Edmunds, surgeon. November 21.
- RANSDEN, ALFRED ALPHEUS, Dewsbury, oil merchant. November 8.

RICHARDS, DAVID, Cadogan House, Newfoundland Street, Aberystwyth, mineral water manufacturer, late Chandler. November 13.
 WALKER, JAMES, 2 Greek Street, Leeds, also 29 Mining Lane, a partner of Levick, Walker & Co., drysalts. November 25.
 WARNER, GEORGE HENRY QUEBELL, Messingham, chemist. November 23.
 WIGGIN, JOHN, Ipswich, chemist and oil and colourman. November 7.

BANKRUPTCY ANNULLED.

BOISSIE, ALFRED, 10 Arundel Street, Haymarket, and Rio de Janeiro, perfumer. Adjudication made September 20; annulled November 8.

DIVIDENDS PAYABLE.

ALLEN, FREDERICK CHARLES, Richmond Villa, and 37 Week Street, Maidstone, dental surgeon. 1st and final, of 3s. 1d.; on and after December 5. E. C. Chatterley's, Queen Street, London.
 DITCHETT, WILLIAM EDWIN, Louth, Lincoln, surgeon. 1st and final, of 9s. 5d.; on and after November 11. Lucas & Lucas's, solicitors, Louth.
 DOWLING, JOHN, 121 and 122 Gloster Road, Brighton, mineral water manufacturer. 1st, of 3s. 2d.; on and after November 21. G. L. Fenner's, 12 Boud Street, Brighton.
 RIGBY, JAMES, 57 Great George Street, Liverpool, chemist. 1st and final, of 5s. 6d.; on and after November 27. Sheen & Broadhurst's, 21 North John Street, Liverpool.

BANKRUPT.

SAVAGE, MARK ANTHONY, 31 Rychill, Newcastle, surgeon and M.D. November 14.

BANKRUPTS—IRELAND.

LITTLE, PETER C., Stephen's Green, Dublin, medical doctor. November 8.
 THACKERY, JAMES, or MACKERY, JAMES, 58 Upper Arthur Street, Belfast, dentist. November 12.

VOLUNTARY WINDINGS-UP.

CHEMICAL AND AMMONIACAL LIQUOR COMPANY (LIMITED). Claims to Thomas Adams, 16 Cambridge Street, Birmingham, timber merchant, by December 12.
 CONNAN'S QUAY CHEMICAL COMPANY (LIMITED). Meeting at 1 Delahay Street, Westminster, December 17, at 3, for liquidators' accounts.

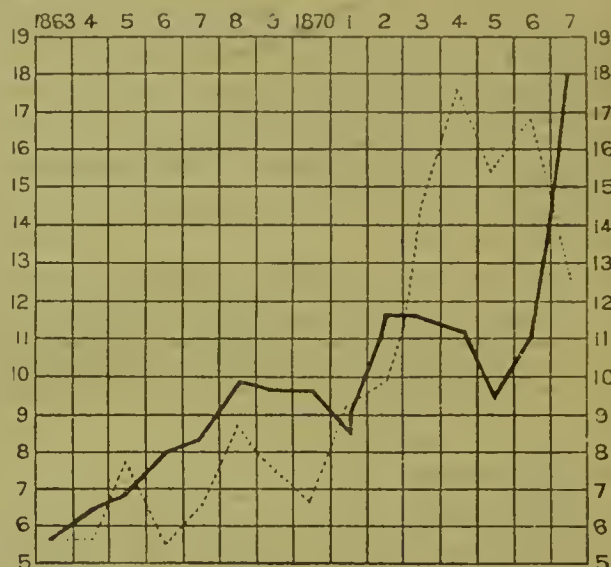
PARTNERSHIPS DISSOLVED.

BULLOCK, MURRIE & Co., 79 Mark Lane, London, chemical and produce brokers. September 30. Debts by R. Bullock.
 BURKINSHAW & BODEN, 36 Lever Street, Manchester, drysalts. Oct. 28. Debts by H. Burkinshaw.
 CAMPBELL & Co., chemical manufacturers, Cartvale Chemical Works, Paisley, and 47 Cochrane Street, Glasgow. September 30. Debts by Robert Haldane.
 COLE & SON, Mcleombe Regis and Radipole, chemists. October 29. Debts by W. B. Cole.
 DAVIS, JOHN, & Co., Dial Glassworks, Stourbridge, flint glass manufacturers. October 15, as regards John Davis, jun. Debts by John Bolton, jun., and W. S. Davis.
 GLOBE COMPANY, manufacturing chemists, Glasgow and London. November 5. Debts by R. Smith and J. Colthart, who continue under the same name.
 HAY & BLACK, chemical and produce merchants, Glasgow. September 30. Debts by G. D. Black.
 HUNT & PARKER, Cannon Street, Birmingham, and Hagley Road, Edgbaston, veterinary surgeons. October 1. Debts by J. M. Parker.
 JOHNSON & LAMMIMAN, Tunbridge Wells, surgeons. November 11.
 KIRKDALE MINERAL WATER COMPANY, 50 Medioc Street, Liverpool, mineral water manufacturers. September 28.
 LEACH & TORROP, Heywood, Lancaster, surgeons. November 21. Debts by J. S. Torrop.
 MASKREW & SANDFORD, Lyndhurst, Hants, surgeons. November 22. Debts by J. Maskrew.
 MILLER & JOHNSON, 36 Mark Lane, London, and Rainham, chemical manure manufacturers, &c. October 31. Debts by C. W. Johnson.
 PHILPOTS, PHILPOTS & LAWTON, Poole and Parkstone, Dorset, surgeons. October 19. As regards H. A. Lawton.
 RAITT & McEWEEN, Burton-on-Trent, physicians. December 25, 1877.
 REED & ROSE, York, surgeons. December 31, 1876.
 ROSS, JAMES, & Co., chemical manufacturers, Lime Wharf Works, Falkirk. October 26. Debts by Robert Orr, who continues under the same firm.
 ROSE & COOPER, Hampstead, surgeons. September 30. Debts by H. C. Rose.
 SMITH, EDWARD, & Co., 11 Kirby Street, Hatton Garden, Mx., manufacturers of chemicals and fancy goods. October 9. Debts by E. Smith.
 WATSON & BAIN, Mere, Wilt, surgeons. November 18.
 WINSHIP & RAYMOND, oil, paint, and colour manufacturers, and DOWSING, ABRAHAM & Co., artificial manure manufacturers, Hull. Sept. 21.

TABLE

SHOWING THE FLUCTUATION IN THE PRICE AND WEIGHT EXPORTED OF PERUVIAN BARK FOR THE LAST 15 YEARS.

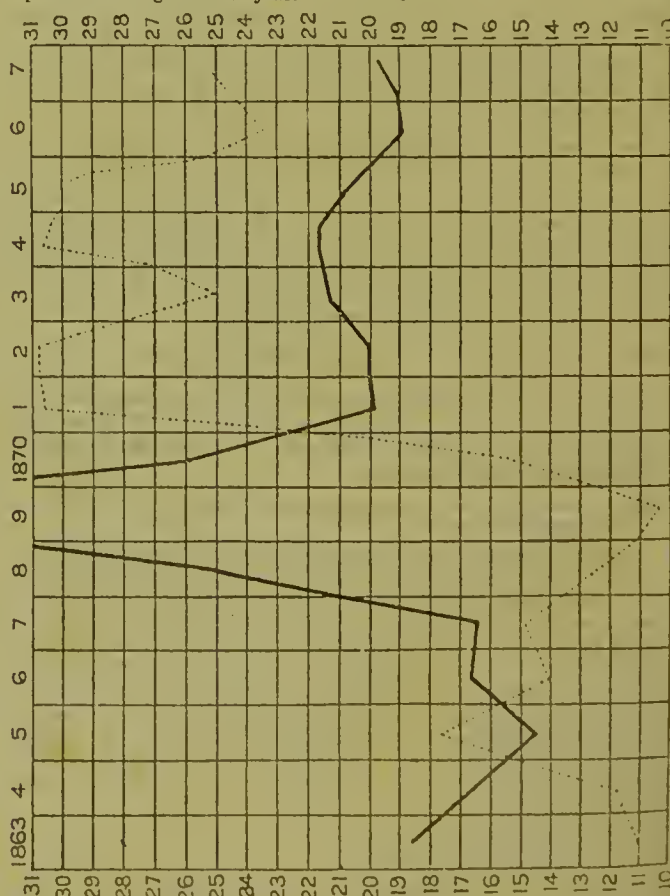
Taken from the figures in the Statistical Abstract for the United Kingdom. The thick line shows the average price per cwt., in pounds sterling, for each year, and the dotted line the amount exported in hundreds of tons. In this table cinchona bark of all descriptions are included, so that it cannot be taken as an absolutely correct indicator of the fluctuations of the kinds used by pharmacists and makers of quinine, though it is relatively accurate.



TABLE

SHOWING THE FLUCTUATIONS IN THE PRICE AND WEIGHT EXPORTED OF OPIUM FOR THE LAST 15 YEARS.

The figures on which this table is based are taken from the Statistical Abstract for the United Kingdom. This gives the weight and value of the opium exported from the United Kingdom, but the imports are not detailed. The values up to the year 1870 inclusive, are "computed;" from 1871 forwards, they are "declared." The dotted line indicates the amount of exports for each year in ten thousands of pounds. The solid line represents the price in shillings for each year.



In 1869 the average price of opium a lb. was 50.89 shillings, an amount too high to represent on this table.

EXCHANGE COLUMN.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

FOR DISPOSAL.

150 stoppered shop rounds, with labels. Fraser, Chemist, Forres.

Southall's 30s.-cabinet, with additions; fair condition; offers. 34/224.

Evans's materia medica cabinet, good as new; cost 4l. 4s.; for 3l. 18/224.

A lot of useful surgical instruments to be sold cheap. J. Allen, Chemist, Plymouth.

Fourteen globe show bottles, holding 1 gallon, stoppered, no reasonable offer refused. 18/223.

Specie jars, height 13 inches, gilt tops; fair offer accepted. Mr. C. Wills, Richmond, Surrey.

Necessary apparatus for mechanical dentistry, equal to new. Stamp. Watson, Chemist, Rochester.

Air-cane in case, cost 7l.; take 3l., or exchange good greyhound. Hambridge, Chemist, Highworth.

Acid Tart., advertised last month, not sold, will take 1s. 3½d. per lb. H. Hare, 81 South Street, Goole.

Five 90-gall. oil cisterns, galvanised iron, fitted with brass taps and loose lids, only used a few months, price 2l. each. Potts, Mansfield.

Ash's 12-gallon gasometer, with 6 feet tubing; Clover's face-piece and two 50-gallon iron bottles. Cash offers. Pearse, Chemist, Cambridge.

Copper Liebig's condenser, telescope slide; only used six times; cost 21s.; for 14s. 6d., or exchange for books. Herbert Chambers, Huntingdon.

Two dozen 1s. 6d. and 1 dozen 3s. Bailey's sulphine, 2l. 10s. the lot; also 1 dozen 1s. and 1 dozen 3s. 6d. Greensill's Mona Bonquet, 1l. 10s. 11/226.

18 bottles ol. citronellæ; 2 Savory & Moore's food, 5s. 6d.; gold half-chronometer watch, by Saulet, Paris, original cost 12l. What offers? 25/225.

49 tins Scott's smoking mixture, 2s. 6d. size, 14s. doz.; 48 cigarettes, 2s. size, 12s. doz.; clean, saleable; carriage paid. Matthews, chemist, Ashby-de-la-Zouch.

What offers, or exchange for Virtue's "Shakespeare," complete, uncut and in good condition, in 42 1s. numbers. Hoddinott, Boundary House, Barnet.

Botany, the official and all the leading wild plants (100), mounted, classed, and named, 7s. 6d.; 150 materia medica specimens, 5s. Tally, chemist, Tunbridge Wells.

Two ounces Howard's quinine, 11s. each; 2 4-oz. Mitcham peppermint, 10s. each; 4 4-oz. pulv. scammon. Aleppo, 5s. each; 3 4-oz. ol. absinthii verum, 7s. each. 35/223.

Surplus stock ol. hyoscy., sem. hyoscy., pulv. cinchon. cort. cinchon., ol. anisi; 10-ton platform weighing machine, new; Carr's patent grinding-mill. "H.," 196 Union Street, Oldham.

Counter scales, as Maw's fig. 1, 16-inch, with hook-end beams, price 15s. Butler, chemist, Tunbridge Wells.

2 microscopes in cabinets; also a gas-stove, suitable for warming shop; and a Fletcher's stove, having a 4-feet chimney. Particulars of each on application to J. T. Chapman, 168 Deansgate, Manchester.

Winch. Ol. Lavand., Aug. 1874, 1½ dozen, 2s. Bradley & Bourdas's white rouge; a few 8 oz. and 10 oz. Freeman's liq. chlorodyni; also, 4 oz. Freeman's chlorodyne; offers wanted, or exchange. Pilling, Salford.

100 lbs. senna, 3d.; 20 cwt. pulv. fenugreek, 17s.; 4 lbs. good isinglass, 5s.; 56 lbs. p. anisi, 6d.; 56 lbs. sem. anisi, 4½d.; 100 lbs. sapo Castile, 4d.; 84 lbs. ultramarine blue, 8d.; Nicholson, 5 Bailgate, Lincoln.

Sixty 1s. 3d. packets of Scott's Royal aromatic smoking mixture; 18 2s. 6d. of the above; 5 1-doz. 1s. boxes Scott's cigarettes for asthma; 6 1-doz. 2s. boxes cigarettes; no reasonable offer refused. 31/224.

4-lb. pulv. gum'guaiaci opt.; Baker's patent sieve, three grades new; ½ doz. Woodhouse's rheumatic elixir, 27s.; offers requested. Wanted, York glass percolator. Chemist, 79 Bank Street, Rawtenstall, Lancashire.

¾-lb. bottle ol. lavand. opt. Mitcham, 50s.; 16 ozs. fluid ess. Moschi, 8s.; 6 gross 1d. squares gutta-percha enamel, 6s. per gross; any quantity sent free by post. L. F. Fresson, Pharmaceutical Chemist, Stevenage, Herts.

The Chemist and Druggist from January, 1867, to December, 1877; also 11 doz. Lyuch's 1d.-packet court plaster and gold-beaters' skin, 1 doz. 3d. court plaster, ½ doz. 3d. gold-beaters' skin. What offers? Cash preferred. Ombler, Chemist, New Southgate.

A few dozen 6d. and 4d. tablets Phipson's glycerine soap, 4s. and 3s.; 10 per cent. off cash; a few dozen 1s. bottles triple essences, same make, 8s., same terms; a few 4-lb. and 7-lb. tins Keeu & Co.'s ground Jamaica ginger. Free on rail. John Morton, 42 Drake Street, Liverpool.

Chemist and Druggist numbers for August, 1871; May, June, July, August, September, and October, 1872; January, February, March, April, May, June, July, August, September, and November, 1873; January, March, August, October, November, and December, 1874; 1875, 1876, 1877, and 1878, complete. What cash offers. J. J. Stone, Alton, Hants.

Watson's "Prælects of Physic," two volumes, 9s. 6d.; Tome's "Dental Surgery," 5s. 6d.; Taylor's "Poisons," 5s. 6d.; Beasley's "Pocket Formulary," 4s.; Beasley's "Receipt Book," 3s.; Williams' "Principles of Medicine," 6s.; Winslow's "Diseases of Brain," 7s.; two pairs tooth forceps, tooth key, extra claws, elevator, movable, left, right, straight, ebony handle, 9s. 6d. the lot. Moore, Chemist, Cheltenham.

Oakley-Coles' "Dental Mechanics," "British Homœopathic Pharmacopœia," "Diseases of Women," by a Loudon Physician, Midwood on "Diseases of Children," Acton's "Reproductive Organs," all nearly new, for half published price. Armstrong, Chemist, Kirkby Stephen, Westmoreland.

2 Churchill's hyposulphites, 4s. 6d.; 8 Moxon's magnesina, 2s. 9d.; 10 Nestle's food, 1s.; 1 Brown's acaciau balsam; 4 Hudson's bleaching liquid, 2s.; 1 Camplin's bran biscuits, 5s.; 2 ozs. hydrochlorate of trimethylamine. What offers or exchange? Fingland, Chemist, Tbornhill, N.B.

Minor Students—50 questions asked of a successful candidate, 1s.; 30 prescriptions given to dispense at the Minor, 1s.; Hints how and what to study, by a successful student, 1s.; 50 illegible prescriptions, 2s. 6d.; 60 mounted indigenous plants, 5s. "Chemist," care of Mr. Edwards, London House, Petbam, Canterbury.

Nests of drawers, window enclosures, glazed cases, shop jars all sizes and colours, show bottles, specie jars, store bottles, pill machines, and every requisite; also medical books, surgical instruments, tobacconists' show-cases, jars, &c., cheap, to clear out. Handsome vase satia flowers, 2l.; sewing machine, 2l. 294 Old Kent Road.

8-ft. plate-glass counter case, as fig. 98, 8l., a bargain, ebonized frame; also a number of screens, desks, counters, drawers, shelves, scales, mortars, pill machines, jars, as figs. A and D, silvered plate-glass, to be sold very cheap, or exchanged, prior to removing to new premises, 207 Old Street, opposite Great Eastern Street. E. Natali, 215 Old Street.

Squire's "Companion," 1871, now, 6s.; ditto, used, 1867, 3s. 6d.; Hooper's "Physician's Vade Mecum," 1858, 2s.; ditto, "Guy and Harley," 1864, 4s. 6d.; Druitt's "Surgeon's Vade Mecum," 1847, 2s.; ditto, 1854, 3s. 6d. Copland's "Medical Dictionary," 3rd volume only 6s. 6d.; "Medical Register," 1868, 3s.; others, cheap; list furnished. Campkitt, Chemist, Cambridge.

Old works on Chemistry, Surgery, Medicine, by Acton, Abernethy, Aecum, Baillie, Bell, Berthollet, Borlaave, Darwin, Fordyce, Fothergill, Goulard, Harvey, Hewson, Hunter, Liebig, Murray, Nisbet, Rusb, Regnerus de Graaf, Ruysch, Sydenham, Turner Underwood, &c.; list on receipt of stamp. Letters only, 11. Preston, 21 Charendon Square, London, N.W.

"Pocket Formulary" (Beasley), 9th edition; "Druggists' General Receipt Book" (Beasley), 7th edition; "Pharmacopœias of London Hospitals" (Squire), 3rd edition; Forne's forceps, full set, 15 pairs, circular pointed, cost 5l., quite new, makers Maw & Co.; Southall's "Materia Medica Cabinet," quite new. What offers? Hartley, 1 Market Place, Haslingdon, Lancashire.

The Chemist and Druggist, 1878, complete, 5s.; 3 vols. *Art Journal*, 1873-75, 40s. Address, C. J. Kirkman, Dedham, Essex.

Enclosure or direct.—"The Druggist, Chemist's Advocate," &c., large parcel, over 100 parts, 5s.; B. Garrod's "Materia Medica," 4s.; Quekett's "Microscope," many plates and engravings, 7s. 6d. (published 21s.); Hunt on "Stammering," 2s. 6d.; Darwin's "Laws of Organic Life," coloured plates, 4 vols., 10s. (published 21. 2s.); Chapman's "Venereal Disease," 2 vols., 6s.; Acton on "Prostitution," 10s. 6d. Letters to H. Preston, 21 Clarendon Square, London.

B. Hill's "Essentials of Baudaging," illustrated, 3s.; Bradley "On Syphilis," 1s. 6d.; T. W. Cooke "On Syphilis," 2s.; Harrison's "Venereal Diseases Treatment," 2s. 6d.; Druitt's "Surgeon's Vade Mecum," 10th edition, 7s. 6d.; Kirke's "Handbook Physiology," 4th edition, 4s.; F. W. Headland "On the Action of Medicines," 4s.; "Diseases of Testis," Dr. Curling, illustrated, 2s. 3d.; Watson's "Practice of Physic," 1,224 pages, 3s. 6d., cheap; "Bronchitis," Dr. Copland, 2s.; Dr. Wade "On Stricture," 1s.; printing presses, cheap; dentist's showcase; glycerine, 3d. lb. Adams, 20 Oxford Street, Salford.

For Sale, Cheap.—8-ft. plate-glass counter case, as Maw's 105, 9l.; 4-ft. do. do., as fig. 101, 4l.; 3-ft. as fig. 100, 60s.; 4-ft. do. do., fig. 41, 80s.; 3-ft. as fig. 16, 40s.; a 5-ft. 6-in. dispensing screen, as fig. 164, silvered plate-glass back and plate-glass doors, with tablet, 7l. 10s.; a 5-ft. 6-in. also 6-ft. and 7-ft. dispensing screens, glass case at each side, silvered glass centre, with marble slab in front, silvered plate-glass backs to cases, with tablets on top, equal to new, 8l. 10s. each, bargains; desk and cases, as fig. 21, 65s., if with silvered glass back, 72s.; sponge case, fig. 92, 5l. E. Natali, 213 Old Street, nearly opposite Great Eastern Street, E.C.

Bottles, teats, syringes—stock-taking. White flint phials, 1 and 2-dram, 2s. 6d.; $\frac{1}{2}$ -oz., 3s. 3d.; 1-oz., 3s. 6d.; $\frac{1}{2}$ -oz., 4s.; 2-oz., 4s. 9d.; plate-glass phials, 1-oz., 3s. 3d.; $\frac{1}{2}$ -oz., 3s. 9d.; 2-oz., 4s. 3d.; burst-off oils, gums, &c., 2s. 3d. per gross; plain straight green feeders, 10s. per gross; fitted 6d. feeders, 26s.; 1s. fitted white feeders, porcelain caps, brush, and box complete, 60s. per gross; glass syringes, 2-dram, 15s.; 4-dram, 18s.; 1-oz., female, 24s.; Dr. Clark's pattern, 30s. per gross; white teats, 2s. 9d. per gross; white tubing, 3s. per lb.; glass tubing for feeders, 9d. per gross. Address, H. E. Smith, 8 Adam Street, Adelphi, London.

Royce's "Materia Medica," 5th edition, 9s.; Cooley's "Pharmaceutical Latin Grammar," 2s. 6d.; Mayne's "Medical Vocabulary," latest edition, 6s.; Oliver's "Botany," new edition, 3s.; Comstock's "Natural Philosophy," 3s. 6d.; "Stomach and Urinary Organs," by Prout, 6s. 6d.; Wilson's "Inorganic Chemistry," 2s. 6d.; Galloway's "First Step in Chemistry," 2nd edition, 2s. 6d.; Liebig's "Animal Chemistry," 2nd edition, 6s. 6d.; "How to Teach Chemistry," by Frankland, 2s. 6d.; Taylor "On Collecting Natural History Objects," new, 2s. 6d.; "Michael Faraday," by Gladstone, 3rd edition, 3s. 6d.; Gregory's "Inorganic Chemistry," 4th edition, 3s. 6d.; "Animal Electricity," by Jones, 2s. 6d.; "Clinical Lectures," by Todd, 3s.; "Neuralgia," by Downing, 6s. 6d.; Budd "On the Stomach," 6s.; "Eccentric Nervous Affections," by Anderson, 3s.; "Disorders of the Stomach," by Turnbull, 3s. 6d.; Fowne's "Chemistry," 10th edition, 8s.; all post or carriage free. Fingland, Chemist, Thornhill, N.B.

A set of fittings, as Maw's 197, equal to new, glass knobs and glass labels, 18l., 12 ft. long; a 10 ft. 6 in. mahogany-top counter, panelled deal front, fig. 146, 5l.; a 7 ft. ditto ditto, 70s.; several others at the same rates, 10s. per foot run; a 7 ft. cupboard, mahogany front, as under case, fig. 200, 84s.; 8 ft. case with cupboard under, as fig. 200, 13l.; several 6-gallon carboys and smaller sizes; specie jars, royal arms, gold covers, equal to new, about 27 in. high, 5l. the pair; several smaller for 50s. pair; a quantity of jars, as fig. A, gold covers and gold labels, 4s. 6d. each; a number of 2, 3, 4 and 5 grain pill machines, to cut 24, new, 16s. 6d. each; 500 mahogany-fronted dovetailed drawers, glass knobs and gold labels, in nests from 2 ft. long to 18 ft., at 2s. 6d. per drawer, if with lockers under and mahogany top, 3s. 3d. per drawer; scales, mortars, ointment jars, &c., &c. E. Natali, 213 Old Street, nearly opposite Great Eastern Street, E.C.

Thirteen nests gold-labelled shop drawers, all sizes; 5 complete shop fittings, as 188 and 190 Maw's; 4 complete shop fittings, as 194 and 196 Maw's; 7 complete mahogany wall cases and cupboards, as 198, 199, 200 Maw's; 8 dispensing counter cases, as 163, 164, 165 Maw's; 2 ditto, as fig. 40 Maw's; 4 ebonyised show cases, 14 in. long, as 81 Maw's, 6s. 6d. each; two 16-in. long ditto, with doors to open and backs silvered, 10s. each; one 6-ft. long, one 7-ft. long handsome dispensing screens, as Treble's 136; one 2-ft. long, one 2-ft. 6 long mahogany desks, as 155 Treble's; 3 label chests and paper stands, as figs. 26 and 51 Maw's; one mahogany counter case, 3-ft. 6 long, sheet glass sloping front counter case, 17 in. wide, 6 in. high, similar to No. 7 Treble's; 28 bent, flat, and upright counter show cases, all sizes; 1,850 shop bottles with new gold labels, all sizes; 379 earthenware shop jars, with new gold labels, all sizes; 50 patent oil bottles, with new gold labels; 130 engraved acid bottles; 88 jujube jars, with new gold labels, as figs. 1 and 2 Maw's; 120 French show jars, as fig. A Maw's, all sizes; 73 pear-shape and upright window and store carboys, all sizes; 7 pill machines; 3 tincture presses; 720 complete iron, marble, mortars and pestles; counter and dispensing scales, store canisters, oil cisterns, tea bins and canisters. Lloyd Rayner, 333 Kingsland Road, London, N.

FORMULÆ.

An excellent Chilblain Lotion, always efficacious; price 2s. 6d. 2/24.

A really good formula for making a salable tooth soap; price 2s. 6d. 2/24/2.

Chlorodyne, for retail and dispensing, equal to any in the market, formula with full directions sent for 5s. in stamps. 33/223.

Glycerine Jelly; Chilblain cure (certain); Cherry Tooth Paste; Cough Mixture; had large sale; worth attention; cheaply turned out. 5s. each; three, 10s. 35/223.

Scarlet Reviver, for cleaning and restoring the colour of hunting coats and soldiers' tunics; large profit; cost 6d.; per gallon, 5s. Provost, chemist, Peterborough.

Condition powder for horses, as recommended by veterinaries, very good and profitable, the recipe 2s. 6d.; also cow drenches, which are highly appreciated by farmers, &c., the recipe 2s. 6d. Pharmacist, 4 Harbour Street, Folkestone.

Gonorrhœa mixture, a most valuable remedy, never fails and much approved of, the recipe for 2s. 6d., very profitable; Shepherd's red pectoral balsam, very effectual for coughs, colds, and asthma, the recipe 2s. 6d., "Medicus," 4 Harbour Street, Folkestone.

Chilblain liniment, most efficacious and commands a great sale, sure to give satisfaction, the recipe 2s. 6d.; rose dentifrice (the original recipe), not only a toothpowder but a preserver to the teeth, sells well, 2s. 6d. Pharmacist, 4 Harbour Street, Folkestone.

Furniture paste, very superior, cleans and puts a brilliant gloss on polished or other furniture, &c., 2s. 6d.; baking powder (original), worth 10s., 2s. 6d. The excellence of these preparations secures for them a good sale. Reference or sample post free. H. Hare, 81 South Street, Goolse.

First-class recipes for specialties in perfumery, horse and cattle medicines, and other proprietary articles of known repute in the Midland districts; the excellence of these preparations secures for them a good sale.—Advertiser, with excellent reference, requires assistance in making use of same. 24/225.

Veterinary Medicines.—Alterative balls and powders; worm balls and drench; antispasmodic draught; cathartic balls; cordial balls and drinks; cough balls; diuretic balls, powders, and drinks; fever balls; tonic balls; astringent balls; blistering ointment; liquid hister; embrocation for sprains; Leeming's essence; each recipe, 7, 12s. 6d.; 12, 20s.; 19, 26s. Address, "Medicus," Apothecaries' Hall, Oban, N.B.

WANTED.

Bottle moulds, any shape or size; particulars to Barnsbury Glass Co., 5 Little Britain, E.C.

"Squire's Companion," last edition (1877). James Denton, 173 Regent Road, Salford, Lancashire.

The Chemist and Druggist for July, August, or September, 1870. Evans, Sons & Co., Hanover Street, Liverpool.

Pereira's "Materia Medica," Bentley and Redwood, 1874, cheap, and in good condition. Hoddinott, Boundary House, Barnet.

A hell-metal mortar and pestle, to hold about two pints, ordinary shape; also three 2-gall bottles, glass or stone, with taps. Metcalfe, Chemist, Hull.

Proctor's "Lectures on Pharmacy;" Wills' "Pharmacy;" "Selecta e Prescriptis;" Bentley's "Botany;" latest editions; state price. "Alpha," Broad Street, Aberdeen.

A powerful hydraulic or screw press suitable for making extract in large quantities, must be a strong one; send particulars and price, prompt cash, to W. Aviss, High Street, Coventry.

Small American drug mill (Parnall's); Beasley's "Receipt Book;" Bentley's "Medicinal Plants;" Cooley's "Cyclopædia;" practical receipts. May, 1 Mayville Street, Stoke Newington, N.

American works on Homœopathy; Macleise's "Surgical Anatomy," coloured plates; Hutton's "Theological Essays," 2 vols.; any relating to Vaccination, Nervous Diseases, or any surgical works prior to 1670; Esquiroir or others on Insanity; Gerard's "Herbal," old books. Give titles, dates, &c.; letters only. H. Preston, 21 Clarendon Square, London, N.W.

INFORMATION WANTED.

Recipe for a good corn dressing, to be sold in packets. Price, &c., 5/24.

Dr. Frederick John Wheeler, English, who married Georgina Margaret Forsyth, native of Aberdeen. Galbraith, chemist, Glasgow.

Mr. R. Stephenson (Bradford), writes, 58/237:—Your "Exchange Column" is a capital medium for disposing of surplus stock. I advertised in it last month for the first time, and sold what I had for sale.



ALTHOUGH according to all philosophical estimates the time has come and gone, over and over again, when trade should commence to improve, it continues to languish with most wearisome perversity. Manufacturers of all kinds of produce have gone on at constantly diminishing profits, and in many cases at an actual loss, until now the strain is beginning to tell with marked effect on them and their workmen. Quite a number of chemical works are now closed on the Tyne, and where this has not actually occurred the prospects are as dull as they can well be.

The Board of Trade Returns for November showed that our exports for last month reached a total of 15,961,669*l.*, or 791,695*l.* less than in November 1877. They also show a large decrease in the value of the imports, but this is partly to be accounted for in a satisfactory manner, as in consequence of good harvests, both here and all over the world, we are buying less wheat than for some years past, and we get what we want at a lower price; but there are other decreases which prove with unmistakable force how poverty and privations are creeping upon the poorer classes.

The regular consumption of chemicals is certainly not smaller than it has ever been, but the facilities of production have grown to such an extent, and competition has become keener, so that without an infusion of speculation into the market prices must tend downwards. They have now (for heavy chemicals), however, reached so low a point, that in many quarters we hear of cessation of production, and this, if carried far enough, will almost certainly induce a rally. Soda ash and crystals have scarcely varied since last month. Bicarbonate, however, has declined from 9*s.* 6*d.* to 9*s.* 3*d.*, and has been done at less than that. Bleaching powder is moderately firm at its last month's price of 5*s.* 9*d.* here, and sells fairly. Cream of tartar has advanced to 10*s.* Tartaric is quiet at 1*s.* 5*d.* for English and 1*s.* 4*d.* for foreign crystals. Citric, after some months of decline, and after being sold at under 2*s.*, has lately rallied, and is in fair demand at 2*s.* 0½*d.* to 2*s.* 1*d.* Oxalic acid, ammonia, and sal ammoniac are unaltered. Sulphate of copper, first quality, is firm at 18*s.* 3*d.*, and as the supply is rather limited this may experience an improvement. Chlorate, and prussiate of potash, are quoted fractionally easier. Pearl ash is rather higher. A good deal of speculation has occurred in arsenic, and the quotation for powdered has been advanced to 9*s.* Sugar of lead is scarce and firm, at 31*s.* for foreign and 38*s.* for English.

Throughout the month quinine has been advancing, the present nominal price being 13*s.* for English and 12*s.* 9*d.* for French. The strong demand for barks, and the regularly advancing prices paid for rich yellow kinds, seem to promise some continuance of, and probably an increase in these rates. Government contracts are the main cause of the advance, and until everybody's frontiers are scientifically adjusted we may expect these frequent variations in this important accessory of war.

Iodine has been advanced 1*d.* per ounce, and it is rumoured that when this is digested another 1*d.* will be added.

Camphor keeps firm at its higher rates. Benzoic acid is cheap; and borax is now supplied more abundantly.

The demand for drugs is much as usual, though the perpetual complaint of dull trade is reiterated on this market. Ceylon and Darjeeling barks have been in brisk demand whenever they have appeared, and an advance of about 1*s.* per lb. for good qualities has been established. Opium is disregarded, and prices tend in buyers' favour. Castor oil

declines, 5*d.* being now the extreme price for first quality. Almond oil will probably rise in consequence of the scarcity of almonds. Balsam copaiba is still cheap, but is a little firmer than it has been. Cape aloes are cheaper, in consequence of large supplies; but Barbados and Socotrine of fine quality will command higher rates. Tonquin beans are again dearer; and fine Vanilla is held for much higher prices. Coloeynth apple may be bought now much lower than for some years. Essences of lemon and bergamot are said to be abundant. Oil of aniseed is a good deal higher; owing to the reduced stock, buyers have been eager to purchase, and the article has been dealt in freely from at 8*s.* 6*d.* up to 11*s.*, with buyers at the latter figure. Cassia oil is also dearer, and sellers hold it for 3*s.* Oils of cloves and cummin have also been stronger, in consequence of the higher price of the fruit and seeds.

The market for oils has been generally dull, except for petroleum. In this article there has been a large business done, and prices have fluctuated a good deal. Refined is now selling at 9½*d.* to 9¾*d.*, though it has almost touched 10*d.* These prices (about) rule for the whole of January, but contracts can be made at more than 1*d.* lower for February. Turpentine is a trifle cheaper. Linseed and rape oils have both receded about 1*d.* in the course of the month. Whale and seal, also, average fully 1*d.* lower. Olive is quite inactive, the only transactions to be recorded on this market having been Levant at 45*s.*, and Seville at 46*s.*

	Stocks Nov. 30		Imports Nov. 30		Deliveries Nov. 30	
	1878	1877	1878	1877	1878	1877
Aloes.....cs	2,036	1,969	2,950	2,165	2,955	2,560
".....kgs	12	14	3	—	5	11
".....gourds	395	2,457	489	2,980	2,403	2,182
Aniseed, Star.....chts	643	984	758	263	1,066	1,009
Arrowroot.....cks	14,875	13,928	14,116	15,915	12,561	11,793
".....bxs & tins	6,652	6,611	8,313	10,286	8,235	7,859
Balsam.....cks, &c.	111	242	247	511	314	625
Bark, Medicinal.....cks, &c.	777	1,193	1,975	3,510	2,367	2,467
".....srns, &c.	8,646	10,325	40,088	26,327	42,238	24,678
Borax.....pkgs	1,067	1,025	912	429	870	805
Becs' Wax.....bls & srns	703	457	664	299	515	256
".....cks & cs	1,797	1,431	1,945	2,366	1,518	1,905
".....cakes	44	48	457	188	421	259
Wax Japan vegetable, pkgs	4,816	6,447	1,139	5,459	2,633	6,544
Camphor.....pkgs	1,075	5,605	4,292	6,020	7,722	6,822
Cardamoms.....chts	284	601	346	507	633	737
Cocculus Indicus bgs, &c.	1,741	2,459	234	572	929	502
Colombo root.....pkgs	608	618	253	375	262	473
Cream of Tartar.....cks	78	85	230	233	261	241
Cubebs.....bgs	170	349	30	132	164	63
Dragonsbloom.....chts	109	153	160	238	174	145
Galls, E.I.....cks & cs	6,192	3,924	9,679	7,306	6,632	4,907
Mediterranean.....sks	955	573	1,581	1,115	1,240	955
Gum—						
Ammoniac.....pkgs	471	489	134	184	141	183
Animi & Copal.....	6,496	8,387	5,226	10,887	6,853	7,316
Arabic, Barbary.....	1,272	1,026	2,344	2,633	2,096	2,613
Turkey.....	501	210	1,342	1,154	1,314	1,226
E.I.....	1,696	1,795	4,385	3,249	4,858	3,070
Assafetida.....	326	305	403	467	379	514
Benjamin.....	1,065	990	1,713	1,670	1,612	1,287
Damar.....	1,406	1,137	2,955	1,817	2,642	2,534
Galbanum.....	19	35	—	15	16	12
Gamboge.....	197	175	375	287	344	321
Guaiacum.....	12	45	144	180	168	144
Kino.....	11	13	12	5	13	10
Kowric.....tns	692	789	1,487	1,423	1,593	1,446
Mastic.....pkgs	163	108	95	26	66	28
Myrrh, E.I.....	137	282	219	440	246	410
Olibanum.....	1,174	3,207	6,612	8,127	8,395	6,369
Sandarac.....	942	218	1,923	1,196	1,459	1,494
Senegal.....tns	19	10	14	2	5	10
Tragacanth.....pkgs	940	208	2,335	815	1,592	698
Ipecacuanha.....cks & bxs	276	243	695	475	731	395
Jalap.....bls	460	56	209	345	286	429
Nux Vomica.....pkgs	4,123	1,407	7,114	1,845	4,245	1,947
Oil—						
Castor.....cks	35	—	34	4	7	4
".....cs	3,411	4,528	16,608	15,480	16,689	16,403
".....tns	452	431	1,785	2,127	1,939	2,203
Cocunut.....	1,065	2,577	4,417	9,918	6,252	10,180
Olive.....cks, &c.	522	1,424	2,531	5,571	3,331	4,612
Aniseed.....cs	85	306	474	575	657	488
Cassia.....	56	828	7	703	159	277
Opium.....chts, &c.	1,213	1,534	—	—	—	—
Umbarb.....chts	1,140	1,096	1,769	1,823	1,647	1,675
Sarsaparilla.....bls	795	1,026	1,804	2,486	2,334	2,375
Senna.....bls, &c.	1,570	3,341	1,319	4,534	2,989	3,723
Shellac.....cs, &c.	45,549	39,491	36,015	42,453	32,138	29,864
Terra Japonica, Gambier tns	3,273	1,586	14,568	7,375	13,115	6,726
Cutch.....	3,468	2,320	4,131	2,108	2,999	2,506
Turmeric.....	1,219	1,134	3,080	2,254	3,291	1,755

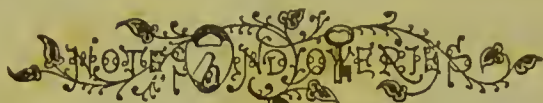
Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining Lano for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.				1878.				1877.			
ACIDS—				s.	d.	s.	d.	s.	d.	s.	d.
Acetic	per lb.	0	2½ to	0	0	0	2½ to	0	0	0	0
Citric	per lb.	2	0 ..	2	1	2	4 ..	2	5	2	5
Hydrochloric	per cwt.	5	0 ..	7	0	4	0 ..	7	0	4	0
Nitric	per lb.	0	4½ ..	0	0	0	4½ ..	0	0	0	0
Oxalic	per lb.	0	4½ ..	0	4½	0	5 ..	0	0	0	0
Sulphuric	per lb.	0	0½ ..	0	1	0	0½ ..	0	1	0	0
Tartaric crystal ..	per lb.	1	5 ..	1	5½	1	5 ..	0	0	0	0
powdered ..	per lb.	1	5 ..	1	5½	1	5 ..	0	0	0	0
ANTIMONY ore	per ton	240	0 ..	300	0	240	0 ..	300	0	240	0
crude ..	per cwt.	32	6 ..	0	0	37	0 ..	0	0	37	0
star	per lb.	50	0 ..	0	0	49	0 ..	0	0	49	0
ARSENIC, lump	per lb.	0	0 ..	0	0	25	0 ..	25	6	25	6
powder	per lb.	9	0 ..	0	0	9	0 ..	9	3	9	3
BRIMSTONE, rough ..	per ton	105	0 ..	115	0	110	0 ..	115	0	110	0
roll ..	per cwt.	9	6 ..	9	9	9	6 ..	10	6	9	6
flour	per lb.	10	6 ..	13	6	11	6 ..	13	6	11	6
IODINE, dry	per oz.	1	1 ..	0	0	0	10½ ..	0	0	0	10½
IVORY BLACK, dry ..	per cwt.	8	6 ..	0	0	8	6 ..	0	0	8	6
MAGNESIA, calcined ..	per lb.	1	10 ..	0	0	1	10 ..	0	0	1	10
MERCURY	per bottle	135	0 ..	0	0	147	6 ..	0	0	147	6
MINIUM, red	per cwt.	16	9 ..	17	0	21	6 ..	0	0	21	6
orange ..	per lb.	28	6 ..	0	0	33	0 ..	0	0	33	0
PRECIPITATE, red ..	per lb.	3	5 ..	0	0	3	7 ..	0	0	3	7
white ..	per lb.	3	4 ..	0	0	3	6 ..	0	0	3	6
PRUSSIAN BLUE ..	per lb.	0	0 ..	0	0	0	0 ..	0	0	0	0
SALTS—				1878.				1877.			
Alum	per ton	120	0 ..	125	0	137	6 ..	145	0	137	6
powder	per lb.	140	0 ..	0	0	155	0 ..	157	6	155	0
Ammonia:											
Carbonate	per lb.	0	6½ ..	0	6½	0	5½ ..	0	5½	0	5½
Hydrochlorate, crude,											
white	per ton	600	0 ..	720	0	560	0 ..	720	0	560	0
British (see Sal Am.)											
Sulphate	per ton	385	0 ..	390	0	405	0 ..	415	0	405	0
Argol, Cape	per cwt.	75	0 ..	82	0	75	0 ..	95	0	75	0
Red	per lb.	52	0 ..	70	0	67	0 ..	73	0	67	0
Oporet, red ..	per lb.	32	0 ..	32	6	33	0 ..	0	0	33	0
Sicily ..	per lb.	60	0 ..	65	0	61	0 ..	65	0	61	0
Ashes (see Potash and Soda)											
Bleaching powd.	per cwt.	5	9 ..	0	0	6	3 ..	0	0	6	3
Borax, crude	per lb.	27	0 ..	30	0	27	0 ..	38	0	27	0
British refnd.	per lb.	35	6 ..	36	0	37	6 ..	0	0	37	6
Calomel	per lb.	3	0 ..	0	0	3	2 ..	0	0	3	2
Copper:											
Sulphate	per cwt.	18	3 ..	18	6	20	0 ..	20	6	20	0
Copperas, green ..	per ton	50	0 ..	0	0	55	0 ..	0	0	55	0
Corrosive Sublimate p. lb.		2	5 ..	0	0	2	7 ..	0	0	2	7
Or. Tartar, French, p. cwt.		104	0 ..	0	0	101	0 ..	0	0	101	0
brown ..	per lb.	80	0 ..	82	6	0	0 ..	0	0	0	0
Epsom Salts	per cwt.	4	3 ..	6	0	4	3 ..	6	0	4	3
Glauber Salts	per lb.	3	0 ..	4	6	3	0 ..	4	6	3	0
Lime:											
Acetate, white, per cwt.		11	0 ..	20	0	11	0 ..	20	0	11	0
Magnesia: Carbonate ..	per lb.	47	6 ..	0	0	47	6 ..	0	0	47	6
Potash:											
Bichromate	per lb.	0	4½ ..	0	5	0	3½ ..	0	4	0	3½
Carbonate:											
Potashes, Canada, 1st											
sort	per cwt.	22	0 ..	22	6	22	6 ..	23	0	22	6
Pearlshes, Canada, 1st											
sort	per cwt.	33	0 ..	33	6	35	0 ..	0	0	35	0
Chlorate	per lb.	0	6½ ..	0	6½	0	8 ..	0	8½	0	8½
Prussiate	per lb.	0	10½ ..	0	11½	0	10½ ..	0	11	0	10½
red	per lb.	1	7½ ..	1	8	0	0 ..	0	0	0	0
Tartrate (see Argol and Cream of Tartar)											
Potassium:											
Bromide	per lb.	2	6 ..	0	0	0	0 ..	0	0	0	0
Chloride	per cwt.	6	6 ..	0	0	0	0 ..	0	0	0	0
Iodide	per lb.	16	0 ..	0	0	13	6 ..	14	0	13	6
Quinine:											
Sulphate, British, in											
bottles	per oz.	13	0 ..	0	0	11	6 ..	0	0	11	6
Sulphate, French ..	per lb.	12	9 ..	0	0	11	0 ..	11	3	11	0
Sal Acetate	per lb.	0	6½ ..	0	7	0	7 ..	0	7½	0	7½
Sal Ammoniac, Brit. cwt.		44	0 ..	45	0	42	0 ..	43	0	42	0
Saltpetre:											
Bengal, 6 per cent. or											
under	per cwt.	10	6 ..	20	0	22	0 ..	22	6	22	0
Bengal, over 6 percent.											
per cwt.		18	6 ..	19	3	20	6 ..	21	6	20	6
British, refined ..	per lb.	23	6 ..	25	0	24	9 ..	26	0	24	9
Soda: Bicarbonate, p. cwt.		9	0 ..	9	3	10	0 ..	10	3	10	0
Carbonate:											
Soda Ash	per deg.	0	1½ ..	0	0	0	1½ ..	0	1½	0	1½
Soda Crystals per ton		65	0 ..	0	0	77	6 ..	0	0	77	6
Hypo-sulphite, per cwt.		0	0 ..	0	0	0	0 ..	0	0	0	0
Nitrate	per lb.	13	0 ..	14	0	15	0 ..	15	3	15	0
SUGAR OF LEAD, White cwt.		38	0 ..	0	0	36	0 ..	37	0	36	0
Brown, cwt.		26	6 ..	0	0	26	0 ..	0	0	26	0
SULPHUR (see Brimstone)											

1878.				1877.					
	s.	d.		s.	d.		s.	d.	
VERDIGRIS	per lb.	1	1 to	1	5	1	1 to	1	5
VERMILION, English ..	per lb.	2	6 ..	2	8	2	8 ..	0	0
China ..	per lb.	2	6 ..	0	0	2	2 ..	0	0
DRUGS.									
ALOE, Hepatic	per cwt.	80	0 ..	160	0	70	0 ..	180	0
Socotrine ..	per lb.	75	0 ..	200	0	85	0 ..	200	0
Cape, good ..	per lb.	40	0 ..	44	0	47	0 ..	51	0
Inferior ..	per lb.	38	0 ..	40	0	41	0 ..	46	0
Barbadoes ..	per lb.	50	0 ..	190	0	40	0 ..	160	0
AMBERGRIS, grey	per lb.	80	0 ..	85	0	80	0 ..	85	0
BALSAM—									
Canada	per lb.	0	8 ..	0	8½	1	0 ..	0	0
Capivi	per lb.	1	3½ ..	1	6	1	4½ ..	1	6
Poru	per lb.	0	0 ..	0	0	4	10 ..	0	0
Tolu	per lb.	3	0 ..	0	0	5	9 ..	6	0
BARKS—									
Canella alba	per cwt.	24	0 ..	30	0	18	0 ..	22	0
Cascarilla	per lb.	17	0 ..	24	6	15	6 ..	23	0
Peru, crown & grey per lb.		1	2 ..	2	7	1	0 ..	3	0
Calisaya, flat ..	per lb.	2	4 ..	4	6	3	6 ..	4	6
quill ..	per lb.	4	0 ..	7	0	4	6 ..	7	0
Carthagena ..	per lb.	2	4 ..	4	8	1	8 ..	3	0
Columbian ..	per lb.	1	6 ..	6	4	2	9 ..	5	7
E. I.	per lb.	1	6 ..	3	0	1	2 ..	4	0
good & fine ..	per lb.	3	6 ..	7	0	4	8 ..	8	3
Pitayo	per lb.	0	6 ..	3	2	0	6 ..	1	6
Red	per lb.	3	0 ..	8	0	3	3 ..	5	0
Buchu Leaves	per lb.	0	2 ..	1	3	0	2½ ..	1	3
CAMPOR, China	per cwt.	102	6 ..	0	0	85	0 ..	90	0
Japan ..	per lb.	105	0 ..	0	0	87	6 ..	95	0
Refin. Eng. per lb.		1	5 ..	0	0	1	2½ ..	0	0
CANTHARIDES	per lb.	1	8 ..	4	5	1	11 ..	5	0
CHAMOMILE FLOWERS p. cwt.		40	0 ..	80	0	50	0 ..	200	0
CASTOREUM	per lb.	0	0 ..	0	0	9	0 ..	30	0
DRAGON'S BLOOD, l. p. cwt.		105	0 ..	220	0	85	0 ..	280	0
FRUITS AND SEEDS (see also Seeds and Spices).									
Anise, China Star per cwt.		80	0 ..	85	0	92	6 ..	102	6
Spanish, &c. ..	per lb.	26	0 ..	36	9	39	0 ..	45	0
Beans, Tonguin ..	per lb.	4	6 ..	7	6	1	9 ..	5	0
Cardamom, Malabar									
good	per lb.	6	0 ..	7	0	5	0 ..	5	10
inferior ..	per lb.	2	0 ..	5	10	1	6 ..	4	5
Aleppy ..	per lb.	2	0 ..	6	8	3	6 ..	5	3
Madras ..	per lb.	2	8 ..	4	6	2	2 ..	3	6
Ceylon ..	per lb.	3	6 ..	4	9	3	6 ..	4	6
Cassia Fistula	per cwt.	55	0 ..	57	0	81	0 ..	90	0
Castor Seeds ..	per lb.	0	0 ..	0	0	0	0 ..	0	0
Cocculus Indicus ..	per lb.	7	3 ..	8	3	9	6 ..	11	0
Colocynth, apple ..	per lb.	0	8½ ..	1	0	1	0 ..	1	9
Croton Seeds	per cwt.	31	0 ..	33	0	26	0 ..	27	6
Cubebs	per lb.	37	0 ..	49	0	27	0 ..	27	6
Cummi	per lb.	43	0 ..	50	0	20	0 ..	30	0
Dividivi	per lb.	11	0 ..	14	6	12	6 ..	15	6
Fenugreek ..	per lb.	0	0 ..	0	0	6	0 ..	13	0
Guinea Grains ..	per lb.	29	0 ..	30	0	28	6 ..	0	0
Juniper Berries ..	per lb.	0	0 ..	0	0	8	0 ..	10	0
Nux Vomica ..	per lb.	7	6 ..	11	6	9	0 ..	14	6
Tamarinds, East India,	per lb.	12	0 ..	19	0	0	0 ..	0	0
West India ..	per lb.	22	0 ..	31	0	25	6 ..	27	6
Vanilla, large	per lb.	20	0 ..	26	6	27	0 ..	31	0
inferior ..	per lb.	12	0 ..	19	6	15	0 ..	26	0
GINGER, Preserved, per lb.		0	5½ ..	0	6	0	4½ ..	0	7
HONEY, Chili	per cwt.	30	0 ..	36	0	44	0 ..	48	0
Jamaica ..	per lb.	35	0 ..	41	0	38	0 ..	43	0
Australian ..	per lb.	0	0 ..	0	0	0	0 ..	0	0
IPEACACUANHA	per lb.	4	3 ..	4	6	5	6 ..	5	9
ISINGLASS, Brazil..									
Tongue sort ..	per lb.	3	6 ..	5	5	3	6 ..	5	8
East India ..	per lb.	1	6 ..	4	10	2	6 ..	5	6
West India ..	per lb.	4	0 ..	4	10	4	2 ..	4	10
Russ. long staplo	per lb.	6	0 ..	12	0	8	0 ..	15	0
inferior ..	per lb.	0	0 ..	0	0	0	0 ..	0	0
Simovia ..	per lb.	1	6 ..	3	0	1	6 ..	3	0
JALAP, good	per lb.	0	11 ..	1	2	0	8 ..	0	10
infer. & stems ..	per lb.	0	9½ ..	0	10½	0	7 ..	0	7½
LEMON JUICE	per degree	0	0½ ..	0	1½	0	1½ ..	0	1½
LIME JUICE	per gall.	1	3 ..	1	8	0	0 ..	0	0
LIQUORICE, Spanish per cwt.		0	0 ..	0	0	34	0 ..	39	0
Liquorice Root ..	per lb.	0	0 ..	0	0	0	0 ..	0	0
MANNA, flaky	per lb.	0	0 ..	0	0	3	6 ..	4	0
small	per lb.	0	0 ..	0	0	1	4 ..	1	6
MUSK, Pod	per oz.	13	0 ..	50	0	23	0 ..	54	6
Grain	per lb.	47	0 ..	55	0	35	0 ..	55	0
OILS (see also separate list)									
Almond, expressed per lb.		1	10 ..	0	0	1	8 ..	0	0
Castor, 1st palo	per lb.	0	4½ ..	0	5	0	5 ..	0	0
second ..	per lb.	0	4½ ..	0	4½	0	4½ ..	0	4½
Cod Liver	per gall.	2	9 ..	5	0	2	8 ..	4	6
Croton	per oz.	0	2½ ..	0	2½	0	2½ ..	0	2½
Essential Oils:									
Almond	per lb.	20	0 ..	0	0	25	6 ..	0	0
Aniso-seed	per lb.	11	0 ..	0	0	6	3 ..	6	4
Bay	per cwt.	0	0 ..	0	0	65	0 ..	70	0
Bergamot	per lb.	0	0 ..	0	0	10	0 ..	15	0
Caipout	per bottle	3	6 ..	4	0	8	0 ..	3	6
Caraway	per lb.	0	0 ..	0	0	9	0 ..	9	3
Cassia	per lb.	2	8 ..	2	9	3	2 ..	0	0
Cinnamon	per oz.	4	0 ..	5	6	3	6 ..	5	6
Cinnamon-leaf ..	per lb.	0	1½ ..	0	1½	0	2½ ..	0	3
Citronello	per lb.	0	3 ..	0	0	0	2½ ..	0	2½
Clove	per lb.	8	9 ..	0	0	8	6 ..	0	0
Ginger Grass ..	per lb.	0	2½ ..	0	3	0	2½ ..	0	3
Lavender	per lb.	0	0 ..	0	0	1	8 ..	7	0
Lemon	per lb.	0	0 ..	8	2	7	0 ..	9	0
Lemongrass	per oz.	0	2½ ..	0	0	0	2½ ..	0	2½

1878.				1877.				1878.				1877.			
		s. d.	s. d.			s. d.	s. d.			£ s.	£ s.			£ s.	£ s.
Essential Oils, continued:—															
Neroli	per oz.	0 0	to 0 0	3 0	to 6 6	0 4½	0 5	WHALE, South Sea, pale, per tun	29 0	to 0 0	35 0	to 0 0	35 0	to 0 0	34 0
Nutmeg	"	0 3	0 4	6 0	9 0	6 0	9 0	" yellow "	27 0	23 0	33 0	31 0	33 0	31 0	31 0
Orange	per lb.	5 0	7 0	16 0	22 0	1 9	3 0	" brown "	25 0	26 0	30 0	31 0	30 0	31 0	31 0
Otto of Roses	per oz.	21 0	35 0	1 9	3 0	10 9	12 6	East India, Fish "	0 0	0 0	25 10	0 0	25 10	0 0	0 0
Patchouli	"	1 6	3 0	24 0	25 0	2 0	2 6	OLIVE, Gallpoll per ton	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Peppermint:				2 3	2 6	12 0	15 0	" Gloja	0 0	0 0	0 0	0 0	0 0	0 0	0 0
American	per lb.	10 0	12 6	0 0	0 0	0 0	0 0	" Levant	45 0	0 0	48 10	0 0	48 10	0 0	0 0
English	"	21 0	23 0	0 0	0 0	0 0	0 0	" Mogador	0 0	0 0	48 0	0 0	48 0	0 0	0 0
Rosemary	"	0 0	0 0	0 0	0 0	0 0	0 0	" Spanish	46 0	0 0	49 10	0 0	49 10	0 0	0 0
Sassafras	"	2 0	2 3	0 0	0 0	0 0	0 0	" Sicily	0 0	0 0	49 0	0 0	49 0	0 0	0 0
Spearmint	"	0 0	0 0	0 0	0 0	0 0	0 0	COCOANUT, Cochinn..	50 0	0 0	43 0	0 0	43 0	0 0	0 0
Thyme	"	0 0	0 0	0 0	0 0	0 0	0 0	" Ceylon	47 0	0 0	38 10	0 0	38 10	0 0	0 0
Mace, expressed	per oz.	0 6	0 7	0 6	0 10	0 6	0 10	" Mauritius	48 0	0 0	39 0	0 0	39 0	0 0	4) 0
OPIMUM, Turkey	per lb.	15 0	17 0	16 6	18 6	10 0	12 0	GROUND NUT AND GINGELLY:							
inferior	"	13 0	14 6	10 0	12 0	30 0	34 0	Bombay	0 0	0 0	0 0	0 0	0 0	0 0	0 0
QUASSIA (bitter wood) per ton	100 0	130 0	100 0	130 0	2 6	3 0	0 9	" Madras	0 0	0 0	0 0	0 0	0 0	0 0	0 0
RHUBARB, China, good and								" PALM, fine	37 0	0 0	40 10	0 0	40 10	0 0	0 0
fine	per lb.	1 6	3 0	0 9	2 0	0 9	2 0	" LINSEED	24 2 6	24 5	28 5	23 10	28 5	23 10	23 10
Mid. to ord.	"	0 9	1 4	0 0	0 0	0 0	0 0	" RAPESEED, English, pale ..	31 15	0 0	39 10	0 0	39 10	0 0	0 0
Dutch Trimmed..	"	0 0	0 0	0 0	0 0	0 0	0 0	" " brown	29 15	0 0	37 10	0 0	37 10	0 0	0 0
ROOTS—Calumba	per cwt.	35 0	60 0	23 0	38 0	23 0	38 0	" Foreign, pale ..	0 0	0 0	0 0	0 0	0 0	0 0	0 0
China	"	0 0	0 0	30 0	32 0	0 3	0 4	" brown	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Chiretta	per lb.	0 0	0 0	0 3	0 4	20 0	21 0	COTTONSEED	28 0	0 0	33 0	0 0	33 0	0 0	0 0
Galangal	per cwt.	22 0	23 0	20 0	21 0	20 0	22 0	LARD	38 0	39 0	50 0	0 0	50 0	0 0	0 0
Gentian	"	18 0	20 0	0 0	0 0	0 0	0 0	TALLOW	31 0	35 0	30 0	54 0	30 0	54 0	54 0
Hellebore	"	0 0	0 0	0 0	0 0	0 0	0 0								
Orris	"	22 0	45 0	55 0	65 0	70 0	76 0	TURPENTINE, American, cks.	21 3	21 6	24 0	0 0	24 0	0 0	0 0
Pellitory	"	0 0	0 0	0 0	0 0	0 0	0 0	" French	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Pink	per lb.	0 0	0 0	0 0	0 0	0 0	0 0	PETROLEUM, Crude	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Rhatany	"	0 2	0 5	0 4	0 8	0 4	0 8	" refined, per gall.	0 9½	0 9½	1 0	1 0½	1 0	1 0½	1 0½
Seneca	"	2 4	2 0	3 6	4 0	1 3	1 6	" Spirit	0 9½	0 10	0 8	0 9½	0 8	0 9½	0 9½
Snake	"	0 10	1 0	1 3	1 6	30 0	34 0	SEEDS.							
SAFFRON, Spanish ..		20 0	40 0	240 0	300 0	0 5	0 7	CANARY	47 0	57 0	43 0	55 0	43 0	55 0	55 0
SALEP	per cwt.	140 0	200 0	0 5	0 7	2 2	2 6	CARAWAY, English per cwt.	0 0	0 0	43 0	45 0	43 0	45 0	45 0
SARSAPARILLA, Lima per lb.		0 4½	0 6	0 11	1 6	0 11	1 6	" German, &c....	32 0	36 0	48 0	49 0	48 0	49 0	49 0
Gnayaquil	"	1 3	1 5	9 0	11 0	9 0	11 0	CORIANDE	16 0	20 0	18 0	23 0	18 0	23 0	23 0
Honduras	"	1 0	1 4	24 0	30 0	6 0	22 0	HEMP	35 0	40 0	0 0	0 0	0 0	0 0	0 0
Jamaica	"	1 0	1 7	0 1	0 4	0 1	0 4	" LINSEED English	60 0	63 0	0 0	0 0	0 0	0 0	0 0
SASSAFRAS	per cwt.	9 0	11 0	0 1	0 4	0 1	0 4	" Black Sea & Azof ..	46 0	46 6	55 0	0 0	55 0	0 0	0 0
SCAMMONY, Virgin	per lb.	0 0	0 0	0 1	0 4	0 1	0 4	" Calcutta	46 3	46 6	52 6	0 0	52 6	0 0	0 0
second & ordinary ..	"	0 0	0 0	0 1	0 4	0 1	0 4	" Bombay	48 0	0 0	57 0	0 0	57 0	0 0	0 0
SENNA, Bombay	"	0 1	0 2½	0 5	2 0	0 5	2 0	" St. Petersburg ..	45 6	46 6	52 6	53 0	52 6	53 0	53 0
Tinnivelly	"	0 2	1 7	1 2	0 0	1 2	0 0	Mustard, brown	14 0	17 0	0 0	0 0	0 0	0 0	0 0
Alexandria	"	0 4	1 6	1 4	0 0	1 4	0 0	" white	9 0	12 6	13 0	16 0	13 0	16 0	16 0
SPERMACELE, refined ..	"	1 4	0 0	1 2	0 0	0 2	0 0	POPPY, East India, per qr.	43 0	43 6	54 6	0 0	54 6	0 0	0 0
American	"	1 1	1 3	0 2½	0 3½	0 2½	0 3½	SPICES.							
SQUILLS	"	0 2½	0 4½	1 18	2 3	1 0	1 15	CASSIA LIGNEA	39 0	51 0	43 0	60 0	43 0	60 0	60 0
GUMS.								" Vera	22 0	36 0	22 0	45 0	22 0	45 0	45 0
AMMONIAC drop	per cwt.	2 0	2 2	1 0	1 15	12 0	13 15	" Buds	50 0	57 0	70 0	73 0	70 0	73 0	73 0
lump	"	0 15	1 18	9 15	11 15	6 15	9 10	CINNAMON, Ceylon:							
ANIMI, fine washed ..	"	13 15	15 0	4 10	6 12/6	3 0	3 16	" 1st quality	1 4	3 3	2 2	3 6	2 2	3 6	3 6
bold scraped	"	12 0	13 10	2 5	2 17	2 5	2 17	" 2nd do.	1 2	2 4	2 0	2 9	2 0	2 9	2 9
sorts	"	9 2/6	11 17/6	1 10	2 0	1 10	2 0	" 3rd do.	1 1	1 8	1 9	2 3	1 9	2 3	2 3
dark	"	5 0	8 10	6 0	9 10	2 10	3 16	" Tellicherry	1 6	2 4	2 4	2 7	2 4	2 7	2 7
ARABIC, E.I., fine ..				0 0	0 0	1 15	3 0	" Chips	0 2½	0 5	0 3½	0 6½	0 3½	0 6½	0 6½
pale picked ..	"	2 15	3 5	0 0	0 0	0 0	0 0	CLOVES, Penang	1 8	1 10	2 0	2 2	2 0	2 2	2 2
srts., md. to fin. ..	"	2 2	2 14	1 18/6	2 15	1 18/6	2 15	" Amboyna	1 4	1 6	1 5	1 7	1 5	1 7	1 7
garblings ..	"	1 4	2 0	0 15	2 0	0 15	2 0	" Zanzibar	1 3½	1 4½	1 2	1 3	1 2	1 3	1 3
TURKEY, pick. gd. to fin.	"	5 10	9 0	4 5	8 0	5 17/6	14 0	GINGER, Jam., fine per cwt.	90 0	200 0	91 0	202 6	91 0	202 6	202 6
second & inf.	"	3 5	5 5	2 4	5 10	2 4	5 10	" Ord. to good	52 0	80 0	53 0	90 0	53 0	90 0	90 0
in sorts ..	"	2 5	2 10	6 0	6 15	6 0	6 15	" African	21 0	22 0	25 0	26 0	25 0	26 0	26 0
Gedda	"	1 10/6	1 14	4 0	5 0	4 0	5 0	" Bengal	16 0	16 6	21 6	22 6	21 6	22 6	22 6
BARBARY, brown ..	"	2 16	3 0	0 0	0 0	0 0	0 0	" Malabar	0 0	0 0	26 0	28 0	26 0	28 0	28 0
AUSTRALIAN	"	1 15	2 10	1 18/6	2 15	1 18/6	2 15	" Cochin	46 0	125 0	50 0	115 0	50 0	115 0	115 0
ASSAFETIDA, cm. to fin.	"	1 8	3 0	0 15	2 0	0 15	2 0	PEPPER, Blk, Malabar, per lb.	0 3½	0 4½	0 3½	0 5½	0 3½	0 5½	0 5½
BENJAMIN, 1st & 2nd ..	"	21 0	70 0	4 5	8 0	4 5	8 0	" Singapore	0 3½	0 3½	0 3½	0 0	0 3½	0 0	0 0
Sumatra 1st & 2nd ..	"	6 10	14 10	5 17/6	14 0	5 17/6	14 0	" White Tellicherry ..	0 0	0 0	0 10	1 4	0 10	1 4	1 4
3rd ..	"	2 10	3 10	2 4	5 10	2 4	5 10	" Cayenne	1 4	3 1	1 6	3 0	1 6	3 0	3 0
COPAL, Angola red ..	"	0 0	0 0	6 0	6 15	6 0	6 15	MACE, 1st quality ..	1 8	2 6	2 3	3 3	2 3	3 3	3 3
Benguella ..	"	0 0	0 0	4 0	5 0	4 0	5 0	" 2nd and inferior ..	1 0	1 7	1 0	2 2	1 0	2 2	2 2
								NUTMEGS, 78 to 60 to lb.	3 8	5 0	3 11	4 6	3 11	4 6	4 6
Sierra Leone, per lb.	0 7½</														



3/335. *Sarniensis*.—Any of the legally recognised diplomas or licences to practise surgery and medicine are accepted as sufficient preliminary qualification for examination by the **Army Medical Department**. The one you name would do. Candidates for the department must be between 21 and 32 years of age. They will have to submit to a special examination by the department itself. None of the medical licensing bodies accept the Pharmaceutical Preliminary in lieu of their own. Matriculation at a university, middle class (senior), or College of Preceptors (first-class) is accepted in most cases.

61/234. *J. T. D.* asks if "he can keep decoctions of herbs for a length of time, say twelve months, without the use of spirits, in a corked bottle. Would vinegar be of any use?" Professor Tyndall has kept infusions and decoctions for many months in bottles from which air has been rigidly excluded, but you cannot hope to attain to such perfection of hermeticism unless you have the laboratory of the Royal Institution at your back. Vinegar would be of but little use unless you employed it in a pretty strong form. The acetum seillæ, as you are aware, will not keep long without the addition of spirit. Glycerine has preservative powers, and is best suited to your wishes we should suppose, but it is not likely to accomplish all you desire. As to your question whether you would get the better results from decoctions or extracts, that depends entirely on what results you are anxious for. If you want fungi we should recommend the former; for medicinal virtues, the extracts, without doubt.

52/236. *Analyses of Drugs (J. T. S.)*.—For the analysis of manures, chemicals, soils, waters, &c., Sutton's "Volumetric Analysis," Church's "Laboratory Guide," and Normandy's "Commercial Analysis" are good works. For the analysis of drugs and pharmaceutical chemicals Atfield's "Chemistry" will give you many hints, but there is no systematic hook upon the subject, unless Hassall's "Adulteration Detected in Food and Medicine" deserves the name. Your best plan will be to ransack the "Year-book of Pharmacy" and the best pharmaceutical periodicals, and digest into a system all you can find there.

Dog Medicines.—Dogs which refuse medicines prepared in the ordinary way will very often take a sugar-coated pill with great readiness. This hint is worthy the attention of makers of medicines for dogs and of chemists generally, who are often called upon to prescribe for refractory puppies.

Clearing Discoloured Whisky.—"Alpha's" question in September issue respecting the purification of whisky which had taken "the colour and taste of iron," has met with several responses already. We suggested one or two methods. In October, Mr. A. Sawden, and in November "An Irish Chemist," gave methods which had been practically tested; and now the editor of the *Scientific American*, alluding to the subject as having been raised in our correspondence columns describes "a method not generally known, which will be found an effectual remedy in cases of this kind. If a quantity, say 40 gallons, of liquor has been spoiled, take 1 quart of plaster of Paris, and having incorporated with it sufficient water to make it of the consistency of cream, pour the mixture into the barrel of spirits and mix very thoroughly by agitation. This done, allow the barrel to remain undisturbed for a short period, say a week. At the end of this time it will be found that the plaster of Paris has subsided, carrying down with it all of the inky colouring matter, as well as having removed the chalybeate taste. By this simple and harmless method, the finest liquors, although apparently irretrievably ruined, may be restored to their normal condition." We venture to remark that the practical information which this query has brought forth is a good exemplification of the value of a section like our *Notes and Queries* for the interchange of experience. It might be much more valuable if a larger proportion of our readers would help it on.

Gaffer Toboten (36/237), who thinks "the ways of the Excise are like those of a woman, past finding out," asks for particulars respecting the liability of **cough lozenges** to the medicine stamp. This question is replied to in our Editorial Notes, but we may add here that the sale in a box or a parcel, by the shillingsworth or by the pennyworth, can make no difference. If an article is liable in large quantity, it is equally liable for little lots. We may mention that a chemist has recently paid a penalty for selling antibilious pills labelled "—'s antibilious pills."

W. W. C. asks, "Can orange quinine wine, not prepared according to the British Pharm., be sold by attaching a patent medicine stamp to each bottle, or must I have an Excise sweets licence as well? I hold a patent medicine licence, of course." The regulations concerning this article were defined in an Inland Revenue Order issued last June. Quinine wine made in accordance with the British Pharmacopœia—that is, with orange wine and 1 grain of quinine in each—may be sold as such without any licence or stamp. If quinine wine of at least that strength be put up as a proprietary medicine or recommended for any medical purpose, it must bear a patent medicine stamp, and the vendor must hold a patent medicine licence. Wine of less strength can only be sold by persons holding "a 'sweets' licence" and a magistrate's certificate.

32/238. *Condensed Milk Tins*.—"Cornwall."—We do not know personally of any mart for these, but an advertisement in our Exchange Column might lead to business.

1/237. *Miscible Oleum Santal Flavæ*.—"Hibernia."—We do not think any solution of oil of sandal wood can be made which will mix readily with water. But you might make a tincture of the wood by percolating 5 oz. with a pint of rectified spirit. This would probably mix readily with water, though the mixture would be opaque. A dram would be nearly equivalent to a minim of the oil. The fact that miscible copaiba can be made is the result of its containing a large proportion of resinous acids which combine with potassium to form a slightly soluble soap.

50/237. "Inquirer" does not send his name.

35/237. *Glacial Phosphoric Acid*.—P. A. Haggard.—How can glacial phosphoric acid be reduced to the consistence of jelly or thick cream? Verily we know not. It can be obtained in a syrupy state by solution in water, but it will not gelatinise of itself. It could probably be made into a thick paste with finely divided silica obtained by precipitation; but glass and all less permanent bodies would be attacked and destroyed.

11/236. 1. *Dispensing Query*.—"Inquirer," N.B.—The following prescription has given much annoyance. How should it be made up?

R. Glycerin. Amyli	3iv.
Ung. zinci oxidi	3lv.
Lin. campb.	3i. M.

Several ways have been tried, but the glycerine of starch always separates in small pieces.

11/236. 2.—"Are chemists and druggists in Scotland liable to be prosecuted for counter-practice as they are in England, and what are the qualifications of an apothecary?" The Apothecaries Act does not apply to Scotland, but, as Mr. Fairlie stated recently, certain medical organisations have the power of appointing inspectors of drugs, who can enter into shops and report on the drugs sold. An apothecary has to pass a preliminary examination in arts, attend a three years' curriculum of lectures and hospital practice, serve a five years' apprenticeship or pupilage to an apothecary, and finally pass an examination at the Apothecaries Hall.

11/236. 3.—"Ung. veratriæ B.P. after being made up some time gets much darker in colour. Is it possible to prevent this?" Probably not. The change is most likely due to a decomposition of the alkaloid starting changes in the lard itself.

11/236. 4.—*Pil. Rhei co. B.P.* "What is the best powder to roll these pills in? Creta gallica makes a nice finish, but the pills get discoloured on keeping." Lignorie, or starch powder, is usually adopted, but silver leaf or sugar coating makes a more presentable pill.

11/236. 5.—A doctor having a shop may legally keep an unqualified assistant, but he is responsible for the acts of that assistant.

4/236.—*Cough Syrup*.—"Mortuary."—"A cough syrup made of the following ingredients ferments and breaks the bottles. Can this be prevented? Horehound, linseed, sarsaparilla, and cort. pruni virgin, are slowly boiled in water for two hours, then strained and pressed. Cane-syrup is added while the liquid is still warm, and, on cooling, morphia and rectified spirit." We should suggest a cold infusion of horehound, and the employment of some other mucilage than that of linseed, and perhaps the substitution of glycerine for the cane-syrup, or a part thereof.

10/236. *Coffin's Composition Essence*.—J. R. Y.—Composition essence we do not know of. Composition powder, according to Dr. Coffin's "Guide to Health," is made as follows:—Bayberry and Canadian pine and ginger, of each 4 oz. Golden seal and saffrafas, of each, 2 ozs. Cayenne and cloves, of each, ½ oz. An article with a similar name, much sold in the United States, is made as follows:—2 lbs. condensed bayberry root bark, 1 lb. condensed hemlock bark, 1 lb. contused ginger, 2 ozs. contused cloves, 2 ozs. contused Cayenne pepper. Dose, a teaspoonful in a tea-cup two-thirds full of boiling water. The hemlock is generally omitted on account of its excessive astringency. Another formula will be found on page 82 of THE CHEMIST AND DRUGGIST for February of this year.

57/238. *Indignant Chemist*.—Your letter reached us too late for insertion. If you and others will really, at the elections, vote for Councillors who think as you do, you will soon get a different spirit into the Council. A number of members vote year after year for the same men because they are men of position, and then wonder and complain that the Ethiopian does not change his skin.

24/232. *Subscriber*.—Messrs. Flax & Co., of 3 East Indian Avenue, Lendenhall Street, the solicitors to the Pharmaceutical Society, would no doubt be the best lawyers to consult on any matter relating to the Pharmacy Act.

27/236. *Afghan*.—It is suggestive of the warlike spirit abroad that we have this month two inquiries respecting appointments to the army medical service. Candidates must hold both a medical and surgical qualification; must be under 32 years of age, but may be married; they will then have to go through a special examination; to spend four months at Netley, attending lectures, &c., and when appointed their salary commences at 250l. a year.

3/224. *Edinburgh Colleges*.—T. B.—Chemists have no advantage over other people in the matter of diplomas, except that their previous training may make it easier to pass some of the necessary examinations.